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ADMINISTRATIVE MANAGEMENT

PRINCIPLES AND TECHNIQUES

A Series of Lectures by Outstanding Leaders in
the Management Field, Delivered in the Graduate
School of the Department of Agriculture, from
October to December, 1937



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GRADUATE SCHOOL

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"THE ADMINISTRATIVE MANAGEMENT OF THE GOVERNMENT—NEEDS OVERHAULING"

The above statement is quoted from the President's message to Congress, January 12, 1937. As Government employees, it behooves us all to inform our selves on what is meant by Administrative Management—its principles and techniques. In order that we may all do so, I asked Dr. Woods to plan a course of instruction and invite the best speakers the country affords.

This series of lectures is the result. I hope there will be much departmental and individual profit from them.

HENRY A. WALLACE,
Secretary

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THE SPEAKERS

ORDWAY TEAD: Past President, Society for Advancement of Management; Director, Harper & Bros., and editor, economic and business books; author of several books on Management and Personnel Administration subjects.

RICHARD S. UHRBROCK: Industrial psychologist, author, teacher, research in personnel and management fields.

H. S. PERSON: Management Engineer; author; lecturer, Columbia University; consulting expert R. E. A., and member of Board of Directors of the Society for the Advancement of Management.

GEORGE BABCOCK: Management expert, R. E. A.; formerly Factory Manager, Dodge Auto Company; member of the Society for the Advancement of Management; writer on Management subjects.

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C. J. HICKS: Industrial Relations Counselor; long experience in industrial relations work in large industrial organizations.

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FOREWORD

To the Department of Agriculture has been delegated the responsibility for the management of many important activities and projects. The Department wants to do a good management job. For this reason, the Secretary asked the Graduate School to give a course in Administrative Management. This series of lectures is the result.

In planning the course we wanted to get not only nationally known leaders in the field, but also so to select them that they might represent various groups or schools of thought, and represent also a broad background of experience. We selected them from the best schools, from government, from industry, from management associations, and from a non-professional group to represent the general public point of view.

From all these sources we received the heartiest cooperation and the result we give you herein. We believe you will find it worth while.

A. F. WOODS,
Director



INTRODUCTION

The Graduate School serves the Department of Agriculture. It attempts to give instruction that meets the needs of Department employees. In an organization so large, more than eighty thousand employees, the problems of administration are great. Hundreds of men must fill important administrative positions. These men need training. To meet its responsibility, therefore, this course was offered; and since only a few hundred could attend the lectures, they are now being published.

Agriculture being a scientific Department, its employees are interested only in the scientific approach, in scientific management. The lectures fully meet that interest. All lecturers have used the scientific approach and both the principles and the philosophy of management are clearly but concisely stated in simple, understandable terms.

To me, the remarkable thing about the lectures is their coordination; prepared by ten different men with ten different backgrounds, coming from ten different organizations with ten different functions, the lectures nevertheless reflecting the same fundamental approach and the same philosophy. All go back to the human problem involved in all management. Dr. Donham, a teacher, tells us that management is essentially a problem in human biology; Mr. Wolf, the executive, emphasizes that human attitudes are first in importance; while Mrs. Greenough, the public's representative, tells us that good laws are valueless without efficient public officials. Truly every management problem resolves itself into a human problem.

But this statement does not mean that management problems are solved through emotionalism or sentimentality. Dr. Person gives us principles that require exacting scientific application, while Col. Babcock, Mr. Wolf, and others show that this exacting approach wins the most favorable response from employees. Management is a science that when properly applied appeals to our basic nature and makes the tasks of industry or government interesting and satisfying.

In order that they might better understand the application of the principles and techniques discussed by the lecturers, to their own immediate jobs, a group of Agriculture employees got together after the lectures to discuss this phase of the subject. Some of the material developed in these discussions is included with the hope that it may be of some help to you in attacking the same problem.

PETER KEPLINGER,
Course Chairman



LECTURE I

THE NATIONAL MOVEMENT FOR BETTER PUBLIC SERVICE

*An Introduction to the Problems of
Public Administrative Management*

By ORDDWAY TEAD

I AM at once honored and delighted to be able to be with you again for this, which I think is the third year in your Graduate School work in the employee relations field. And I am impressed also and gratified that you have seen fit to take such a challenging broad subject for this year's serious deliberations. I would say that this is the hardest series of topics that you thus far have undertaken, both in trying to give expression to a problem and to the new ways of meeting it. Indeed, the vocabulary here is new and the applications of all these ideas about administrative methods in government are being come at newly.

I recently heard a story about a grizzled old farmer out in Oklahoma who got into conversation with one of the young agents of the Department of Agriculture.

The old fellow said, "Are you one of Henry Wallace's boys?"

The young man answered, "Yes, I am. How do you like what Mr. Wallace is doing?"

"The trouble with you fellows is you ain't practical farmers."

"What do you mean?"

"You ain't been farming like I have. I've been a *practical* farmer and I've wore out three farms in thirty years."

When we come to talk about administrative management in government, I hope that you and I won't be accused of being practical farmers in this destructive sense. The fact that we are here embarking on this new and timely course shows that we want our practicality to be of a more constructive kind.

Your chairman has just said that the report* that I hold in my hand is not exclusively the theme of these ten lectures. But I shall be much surprised if each of the speakers won't have occasion necessarily to refer to this document and to the other related studies of the problem of administrative management, because they throw so much light upon the nature of the problem.

I shall therefore set myself, in line with our subject, to do four things: First, to suggest why this particular problem of "administrative management" has become suddenly so important. Second, what influences have brought this problem forward so rapidly into public awareness and concern? Third, what do we mean by the phrase

* Report of the President's Committee; Administrative Management in the United States, January 1937; United States Government Printing Office, Washington.

"administrative management?" Finally, I shall have the temerity to state in summary form a few premises, tentative principles, which I would like to offer for the guidance of our thinking as this series of talks goes on. For I am reasonably confident from what I know of those who will lecture in this series that they will amplify and clarify these same premises or hypotheses.

I don't have to labor the point that we have an importantly felt difficulty in the problems of improved public administration. We have around two million employees in state, county and city employment; and nearly one million workers on the federal payroll. In the aggregate, public employment thus constitutes the greatest single type of employment in the land. More than that, it is concerned with a greater variety of service and productive activities than is any single private enterprise. Naturally, the managerial problems of such huge and diverse associated efforts are challenging in the first degree. Especially when we realize that anything like a science of administration is in this country less than two decades old.

In the federal government alone, we have the regular departments, governmental business corporations, other non-business corporations, and the regulative agencies. And one basic problem is as to whether the same type of administration should apply to these different types of agency.

Again, the problem of improved administrative methods promises to be increasingly with us because whether we like it or not, there is a notable increase here as in the rest of the world in the activities and responsibilities which people are asking their governments to assume. This inevitable increase in collective activity requires in the public interest the utmost solicitude about best methods of administration.

Finally, this problem has come to seem important because of the popular and often unfair criticisms of the way in which management work in governmental agencies is supposed to be carried on. What are some of these criticisms? They are as follows:

Government people have too great a vested interest in their jobs. They have sinecures. There is too much overlapping and duplication of enterprises, too much over-staffing of those enterprises, too much security, too much complacency, too much exercise of petty arbitrary power on the part of lesser officials, too loose and diffuse organization, too little regard for merit, too much political influence, too much slowness, bureaucracy and red tape, too low salaries. People of superior capacity are persuaded out of the service by more attractive offers. Too slow advancement, too little initiative being exercised, too little prestige in the community for people who consecrate their lives to public service and, finally, not enough general morale in the service.

Please realize that I do not subscribe to this rather overwhelming array of criticisms. And in the main, I am sure that they grow out of emphasis upon occasional instances unduly magnified. I believe the more important reason why these criticisms are so persistent is that they grow out of wrong notions about human nature itself, about how human nature works, and about what motives and appeals do in fact stir people to action. And it is to help remove this misconception

tion so far as it may affect the thinking of executives in public employment that I am dwelling upon it.

For I am confident that if executives in governmental employment can grasp the lessons of modern psychology as to what human nature is and what motives really appeal to people, they have the opportunity to transform the atmosphere in which public work takes place so that such criticisms as the above will have far less force. For I have always been clear that by the use of the right techniques, executives in the public service can appeal to different motives and stronger motives in human behavior than managers in private industry can prevail themselves of.

In the second place, let us look briefly at the influences that have brought the importance of improvement in management in government so rapidly to the fore in the public's thinking in the last few years. The entire record is too long to detail here. But I should like to remind you that it supplies a splendid instance of the benefits and values that can accrue in a democratic society when it really makes up its mind to effect a basic social improvement.

The impetus to the change that we are now virtually in the midst of has come both through voluntary and through governmental enlightenment and education. It is a movement that has now gained extraordinary momentum both at the federal level and at the level of state, county and municipal affairs.

On the voluntary side, I need only mention the splendid national campaign of the National League of Women Voters. There is also the vigorous new drive of the National Civil Service Reform League. And the activities, both technical and general, of the agencies centering around the Public Administration Clearing House in Chicago. We have also the professional groups within public employment, such as the organized City Managers, the Civil Service Assembly, and the several unions of governmental workers themselves.

In the field of legislation, we are now witnessing a rapid extension of merit systems so that we now have fourteen states with newly organized personnel set-ups, and we have a numerous and increasing list of cities where merit systems are being installed.

A further movement, the benefits of which will accrue throughout the next generation, is the development of schools of public affairs under various names now being created in numerous universities around the country. Your own Graduate School here is one impressive testimony in this direction.

Finally, the literature of this movement is gratifying both in its quality and in the wide reception it has received. Indeed, I sincerely trust that you will avail yourselves of the book list that the chairman has mentioned, since we can not begin in these ten lectures to digest and abstract for your consideration all the wisdom and the illumination that there is in the best dozen or so studies in this field which have been published in the last three years. Most closely related to your own interests in this course is, of course, the document previously alluded to, namely, the Report of the President's Committee on Administrative Management (hereafter referred to as the Brownlow Report), which I sincerely trust you will read and reread.

In the third place, let us examine this phrase, "administrative management," which is a rather new bringing together of two familiar words. The following is my own tentative definition attempting to clarify the meaning of this phrase: Administrative management is the direction of an organization for the purpose of carrying out its specified objectives in such a way that its policies, methods and total operations realize this objective effectively and economically in performance and harmoniously and satisfactorily for the persons involved. That, at least, is what it seems to me administrative management is to mean in a *democratic* society. For in a democracy we must properly concern ourselves not merely with getting things done, but with getting them done under conditions where there is full concern for harmonious, productive, and satisfactory personality growth on the part of the people who are doing the work, from the very last janitor and coal heaver all the way up the line.

Let us look now, as the Brownlow Report suggests, at the administrative management problem in the federal government. Here the broad objective and major mandate is set, of course, by legislation passed by the congress. Congress determines and interprets what it is that our people desire to have done by our nation through public agencies. That decided, the head executive, in this case the President, is charged with the responsibility of giving effect to the objective which the public agency is to fulfill. He then takes certain initiatives toward the beginning of the creation of that agency by the selection of the top administrative group. At that point broad policies of operation are determined.

In the usual vocabulary, the work of directing the carrying out of these policies is spoken of as management. Administration is policy determination; management is policy execution. And we do, of course, have the need for both functions at several levels of responsibility. Now when you put these two words together, as we seemingly shall in the future, and talk about administrative management, we have got to bring these two concepts together and say that we are concerned with the formulation of policy, the planning of action, the initiation of action, enlistment and training of personnel, the controlling of process and result, the provision of research to better implement the process, and finally, the task of inspiring or stimulating the entire enterprise.

The Brownlow Report suggests that once a new area of activity has been set up, it can best be dealt with by the President as head executive in terms of three types of agency—one for planning, one for budget, and one for personnel. And the Report also considers in this connection how executive responsibility for all the slightly more than one hundred Federal agencies is to be intelligently assumed by the President. It makes the point that it is at present well-nigh impossible for this ultimate executive to secure enough knowledge and wisdom to make decisions and approve choices that are at least theoretically being brought to him. It is because of this multiplicity of executives responsible directly to the head executive that the Brownlow Report recommends a new alignment of a dozen major departments, grouping together many present activities; and recom-

mends a White House staff of under-secretaries who shall be liaison assistants to the President in supplying him with information upon which intelligent decision can be based. The Report suggests that in governmental work it is probable that as many as a dozen people, but not more, may be competently and efficiently allowed to report to the head executive. Only so has the head executive the time to assimilate and deal effectively with the truly major issues.

A word of explanation is in order as to the whole idea of the planning function, which the Report suggests as one of the three major functions which should be close to the President. For it should be obvious that planning activity as an executive responsibility has to take place not only at the top level but all the way down the line if orderly execution is to be assured. The planning idea is at the moment under critical scrutiny and under attack from no less a person than Mr. Walter Lippmann in his recent book, "The Good Society." He there contends that you can not have any large scale planning in a society unless it is organized on a highly militarized and dictatorial basis. And he is not alone in suggesting that planning has to mean regimentation.

Planning in public agencies, both for long time and for short time activities, is, however, so crucially important that we should be clear about the fundamental notion that planning does *not* have to be dictatorial and that good planning will never be competently from the top down.

It has been one of the splendid contributions of scientific management, as my colleague in this course, Dr. H. S. Person, has again and again pointed out, that any truly scientific planning has to be built up out of a study of the facts of the particular situation. This is as true in a governmental office, whether in Washington or in San Francisco, as it is of the planning of factory shop activity. Good planning is up from the bottom planning; it is a synthesis of known local needs.

I stress this particularly because, as I shall point out later, I believe that the rank and file of employees has ultimately in the interests of good organization to be more closely integrated into the planning operation itself, than is now the case. Good planning is democratic planning in the sense of taking account of the problems and desires of local units of work and persons. And executives in public employment must certainly be clear in their own thinking that the planning of governmental work must in many respects start not from Washington but at the outermost boundaries of the particular problem in the villages and crossroads of the entire country.

Planning so conceived is a dynamic process of truly regenerative power—a splendid instance of which I believe we have seen in certain phases of the A. A. A. But it must be understood to be fluid, subject to modification in the light of the facts, growing always up from local, consumer and worker interests and desires.

I am strongly of the opinion that the current attacks upon the planning idea come from people who have not understood administrative work in action, who do not thoroughly grasp the idea of local research which management techniques now employ, and who fail to

realize that "bureaucrats" and statisticians in Washington can only be as effective as the honesty and reality of the data brought to them from all over the country allows them to be.

With respect to the second, or budgetary, function discussed in the Brownlow Report, I have one comment to make regarding that phase of the problem which has to do with the initiating of the budget itself.

An appreciable part of the budget has, of course, to do with salaries of public employees. And I want to hazard the rather unusual thought that so far as this phase of budget making is concerned, it has to be integrated far more closely with employee thinking than is now the case. Indeed, I shall dare to suggest that the whole process of budget formulation will eventually start in conference with members of respective unions in agencies in the governmental employ. I understand full well the limits within which position classification and salary determination take place. But I still suggest that in any governmental employment where there is sufficient morale to have the public interest closely at heart, the shaping of the budget should be more democratically conceived.

In the third place, I turn to an analysis of the personnel function in administrative management as the Brownlow Report proposes that it be carried out. I wish here primarily to stress what I think can so easily become a misconception both of this document and of the idea of personnel management in general—namely, the misconception that there is some magical poultice method by which the employment of people called personnel executives miraculously assures that an organization will operate happily and efficiently. Nothing can be further from the truth of a sound concept of the personnel function than any notion that it is a fifth wheel to the coach which in some strange way automatically helps to stabilize the operation of the coach.

Let me therefore try to state positively what the best current practice of industry seems to indicate is the nature of this function. There is a sense in which the personnel function exercises specific staff services for an entire organization and wisely employs expert staff skills to carry out these services. Every executive can not give selection tests; every executive can not shrewdly use the best training methods or conduct job analyses wisely, etc. These and related matters can be better done by a specialist. But beyond this, the major personnel executive in an organization, if he is to justify himself, is a prod and a prick in the conscience and in the thinking and in the performing skill of *every* supervisor of the work of others. His duty is to remind such supervisors to keep always in the front of their thinking the fact that they must facilitate work through appealing soundly to workers. He is concerned to point out to all supervisors what appeals and incentives can stir employee desire, how interest and enthusiasm is aroused and maintained. He is concerned with helping supervisors to take account of and to develop a sense of personal worthfulness in all workers. And again he is concerned to see to it that in whatever associated effort or action employees choose to take, they are being received and dealt with at the managerial level in a deft and cooperative way. In a profound sense, his major duty

is to get all supervisory people to adopt a new and humanly sound attitude for the conduct of their human relations with others.

I think we may fairly say that this whole function is especially needed in public employment because of the fact that we necessarily take many individuals of exceptional technical skill and competence and elevate them into directive posts in divisions and bureaus. And as often as not, the danger is that the training and outlook of such skilled people is of a character as to make them ignore the subtleties of the human relations factor with which they have constantly to deal. To make technical experts who are also executives really inspiring leaders of men is a significant responsibility of the new governmental personnel staffs.

It is in this sense that the face to face personnel work is actually being done by the line executives themselves. The fundamental personnel job is *their* job and it is at once a task of facilitation and of morale building. These specialists who become executives have eventually to be made specialists in organization unity and personality fulfillment. May I repeat this because of its basic importance? It is *every* executive's job to be sure that he is getting organization unity and that he is getting his people to find that they are getting satisfactory life expression through their work.

In connection with a clear grasp of the personnel function, there are a number of subsidiary problems which should be examined. First, in this connection, is the problem of how the rank and file of employees shall get adequate voice and adequate channels of communication, both on the negative side regarding grievances and on the positive side regarding constructive suggestions. The impetus to collective bargaining is now one that seemingly will not be stopped even among governmental employees. And past experience with collective bargaining leads fairly to the conclusion that government executives can have a great deal to do with determining whether the mood and atmosphere in which public collective dealing takes place is at a conflict and grievance level or at a level of active consent, shared responsibility and creative interest. It is only natural that group organization among employees will, when it approaches management, quickly sense and take the color of its own attitude from the attitude of the management people to whom it comes. If managers are bellicose, hostile and reluctant to go into joint conference, it is almost a foregone conclusion that the atmosphere will be charged with conflict. But if the executives at the start go more than half way to welcome group conference and try to stress throughout the dealings how creative benefits for effectiveness in total operation can be achieved, the atmosphere and the results will be quite different.

I would, therefore, say that those of you who do not have ultimate responsibilities for policy on this matter but who nevertheless have to receive the overtures of organized groups, have both a personal and a public duty to approach your management heads with a view to getting a policy enunciated as to the extent to which lesser executives may be allowed to go in encouraging conference instead of suppressing it.

This truth about the kind of mood which is established in which

joint conference takes place becomes especially important when we turn to the matter of establishing fair standards of quantity and quality of work, fair standards of compensation and classification, and effective working conditions. Experience is conclusive that managers animated by good will have to *take the initiative* and go out and seek collective employee support for the discussion of and ultimate agreement about these crucial issues. Efficiency in governmental work at the level of economy of methods requires as its first condition the sharing by employees of the definition of all these work standards on a basis of collective consent.

Only in this way, for example, can we bring into the open and get clarified the question of whether standards of efficiency should be in any ways different in the public service from those in private employment. Has public employment certain distinctive responsibilities for less able workers or for the aging workers? And can public employment have sufficiently flexible policies about incentives to encourage to the full the obviously more able workers? We shall come to grips with these crucial questions only as we face them in collaborative conference of managers and workers.

A final qualifying factor upon the whole problem of administration in the public service is realization that it is being carried on in a total institutional background which may be briefly characterized as an acquisitive society. I want to speak plainly on this point, not because I want to inject political considerations here, but because we cannot escape political considerations in understanding the problem of personnel relations in the public service today.

Specifically, we are witnessing on the part of the New Deal an increasing sharing by governmental action of control in economic affairs formerly thought of as private, individual, and not subject to special regulation. This extension of governmental activity means in the last analysis an increasing interference at many points with what we call "property rights." If property rights are to be subordinated, as the administration states, to human rights, the fact is that a substantial number of public employees are required to implement this process. But people with property rights naturally resent interference with them and restrictions of them. And speaking quite objectively, I see no escape from the conclusion that people with large property rights are bound to (already have and will continue to) bring pressure to bear upon public employees directly, upon public agencies as a whole, and indirectly upon members of Congress and the like. There will be, as there already is, pressure to modify policies, to wipe out of existence this or that public regulative agency and in other ways to try to reduce or nullify the effectiveness of the effort to affirm a public interest over property rights more aggressively than has thus far been the case.

It is thus inevitable that there will be various kinds of political pressure brought to bear on public employees to press for special consideration; that is a natural characteristic in an acquisitive society. But from the point of view of the morale of the public service, from the point of view of continuing and strengthening the operation of the public mandate under which these agencies work, I cannot

escape the conclusion that political pressure from special interests will have to be met, in part at least, by what are essentially political pressures from (among others) public servants themselves. I realize that this sounds like new and unattractive doctrine. And I realize too that those in governmental agencies, whose positions may be threatened by adverse political pressures from property interests which are being assailed, may be thought to be defending those agencies merely from the point of view of their own payroll security.

But what I mean is something a little deeper than this. I mean that at the very least, in their capacity as individual citizens, public employees who have sufficient conviction of the human rights which their work is designed to protect, under a basic political mandate, not only may but should seek and affirm a political affiliation which reinforces their conviction.

Put it another way—and again without any thought of being politically partisan—if a public policy of greater public responsibility for human welfare is the special concern of some one or another political party, it would be not only natural but desirable that public employees should consciously seek affiliation with that party. We cannot forget that today's public activities and consequent public employment proceed out of the executive leadership of a certain broad political outlook. And the question always is whether a majority of the public, including a majority of the public employees, is supporting that executive with his broad policies, or not. I repeat that if you object to my being thus explicit about this interplay of conflicting outlooks, pressures and interests, I can only answer that I am trying in common honesty to bring into the open and acknowledge a play of forces which is tacitly a fact admitted by many already.

By way of summary, I now propose to state a number of broad propositions or principles which I believe underlie considerations that will be raised throughout this course.

First, administrative management in a democratic government implies the effort of carrying out public purposes in a manner which harmonizes the following aims: The particular job must be done well with economy of cost and with the determination of particular policies and methods democratically within each group. The distinctively new note has to be a realization that we are organized departmentally on a more democratic basis, both from the point of view of work accomplishment and from the point of view of an opportunity for reasonable fulfillment of life desires on the part of those engaged in the work.

Second, the fact that public employment is public service means that, increasingly, wise managers will take the initiative in appealing successfully on a group basis for cooperation and creative initiative.

Third, this means and implies that directive genius in public administration has to include true leadership ability at every level so that emphasis will be placed upon group enthusiasm and the stimulus of group morale. The best administrators of tomorrow will be technically qualified but they will also be democratically minded in their administrative outlook and leadership skill.

Fourth, administrative management in public service today works

in a total climate of opinion and sentiment built up from prevailing thought patterns and surrounding institutional conditions of an insecure, acquisitive society. Pressures of special interest upon public service will therefore inevitably require that public employees be consciously alert regarding the protection of their carrying on their jobs in a disinterested way. This implies the support of their major executive. Essentially that support is, under present conditions, of a political sort. In this special sense, it is unrealistic to allege that public employees can be kept out of politics. They have the right and the duty to make vocal their fundamental political conviction regarding the kind and quality of activity that should be publicly administered.

Fifth, good administrative management today requires explicit, articulate, responsible and wisely led organization among the rank and file of workers involved, organization that is met by management in such a way that not only are employee rights protected, but employees are affirmatively stimulated to the best group achievement.

Finally, good administrative management in the public service implies belief on the part of administrators at every level in a national purpose in a democracy—a purpose which is more persuasive, more valid and more appealing than the purposes of non-democratic states. And this purpose affirms that the will of the democratic state is no more but is no less than the firm determination of the people who comprise it, including its own public employees, to live and to grow as individuals in and through their work, devoted to enhancing the quality of the personality of every least one of the members.

DISCUSSION

Mr. Tead's definition of administrative management, "... the direction of an organization for the purpose of carrying out its specified objectives in such a way that its policies, methods, and total operations realize this objective effectively and economically in performance, and harmoniously and satisfactorily for the persons involved," together with his emphasis on planning and personnel, gives us, as Federal employees, something concrete and understandable to work with. As he says, the efficiency of government workers is much criticized. But is that not largely political? Do not most people realize that their government in its activities is not inferior to industry? Four other nationally known management experts have recently told us that government efficiency averages higher than industry. The reason they give is that, as Mr. Tead states, government activities have more appeal to the individual worker.

The difficulty we mostly have in thinking of management principles applied to government is that we try to think of over-all government, and it is too large for us to grasp. Take Mr. Tead's definition: What is the "objective" of government as a whole? It is, in fact, so large that it can be expressed in only the most general terms. But break it up. When we get down to the activities of the units in which we as individuals work, the objective becomes concrete and can be understood and planned for.

Likewise over-all planning from top-government down is impossible to conceive or think of except in the most general terms. But again when we get down to our individual units, plans may become concrete and understandable. But even so, we express ourselves differently at this level, as witness the following sub-group opinions:

Minor executives and even workers with no supervisory responsibility should appreciate the importance of Mr. Tead's point that "good planning is up from the bottom planning." Quality of administrative management is not an exclu-

sive responsibility of the big shots in government or in individual bureaus. The leaders at the top have heavy responsibilities, but the work situation of the most inconspicuous worker needs study of facts and application of management principles, which can best be done by the person who knows that situation most fully, provided he also knows management principles.

* * * * *

Orderly planning processes in connection with both long-range programs and current work loads have been in common use for many years and at every administrative level in some federal agencies. Criticism and attack from within the organization have been directed frequently and beneficially toward particular processes or techniques—never toward “the planning idea” nor as a denial of its vital contribution to orderly, effective execution of the work in hand or ahead. This writer questions that Walter Lippmann intended “The Good Society” as an attack upon the sort of planning which every successful governmental executive must bring into play.

“Regimentation” has become a bogeyman. Certainly in the work of any big organization there are many jobs quite exactly alike which must be performed by many workers and are best performed by one standardized method. When we so plan we have regimentation. But it need not worry us. Regimentation, applied within proper limits, is helpful in freeing individual initiative for exercise in that vast field where it is most needed and will yield maximum results.

The best planning is partly “up from the bottom,” partly “from the top down,” and partly on a long level where forces from both top and bottom meet, possibly conflict for a time at certain points, and finally merge. The rank and file must indeed be closely integrated into the planning operation, the processes must be democratic, fluid, readily adaptable to changing conditions, and somewhere too the voice of authority, the contractual aspects of the plan should be in evidence.

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Mr. Tead’s emphasis on the inevitability of increased demand that governments do more things for society is of profound importance. Sometimes it seems that society can not get along with its bureaucracies, but it certainly can not get along without them. The only reasonable attitude is so to study, develop, and inspire them that they render to society increasingly satisfactory service. The best study and development is that which comes from within. America’s triumph, mass production, exists because of long study and development. The human organisms which serve the public deserve equal attention which, if productive, must employ the approach of modern administrative management.

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The difference between management in industry and in government, if there is any, is probably that expressed in the last clause of Mr. Tead’s definition, “satisfactorily for the persons involved.” We do put a lot of emphasis on giving each worker an opportunity for “satisfactory life expression through work.” This is not done by sacrificing efficiency; it promotes efficiency.

LECTURE II

OBJECTIVES OF MANAGEMENT

By RICHARD STEPHEN UHRBROCK

INTRODUCTION

SINCE every management problem ultimately resolves itself into a personnel problem, I am limiting my discussion to the personnel aspect of administrative management.

Personnel work, in a broad sense, is not a new thing. Its roots lie deep in our industrial past. It may be defined as anything that works toward more efficient working of a producing group, and includes, very definitely, the recognition of the fact that increased production is not the sole criterion. The satisfaction of the worker in his work is of major importance. One of the primary tests of a personnel method is whether it is conducive to the continued well-being and contentment of the worker.

Personnel methods are becoming more scientific as men and women are learning to predict and control the behavior of working units, made up of human beings. These workers have ambitions, hatreds, skills, interests, temperaments, and loyalties. They can be welded into powerful units that will combine their energies into one concentrated, invincible force, or they can be dissolved into antagonistic groups of various sizes that will fight stubbornly to attain opposing ends. Only recently has the personnel director been admitted into the ranks of the executives. Here and there the realization is dawning that it takes special knowledge to find the best available man for a job; that it takes a high degree of skill to train him quickly and effectively for the work to be done; and that it is a feat of no mean order to orient employees and to fuse them into an efficient body of workers. Nor is that all. Men are not content to spend their days in a tread mill. They demand certain satisfactions in addition to wages. The creation of an *esprit de corps* in an establishment does not come by chance. Where it exists at its best, it results from adherence to definite policies and procedures, that, for want of a better term, we call personnel methods.

ANTECEDENTS OF PERSONNEL WORK

Let us examine, very briefly, some of the antecedents of personnel work, and try to discover why it was inevitable that such work should become an accepted phase of modern industrial management.

Originally, each family was a self-contained unit. All food was raised by those who were to consume it. Furniture was made by the members of the family from timber cut from their own holdings. Hides were tanned and made into boots and shoes. Tallow was made into candles. Wool was carded, spun, and woven by the women of the family. The boys helped their fathers and performed tasks that

were equal to their strength and skill. In the same way the girls helped their mothers. In this early period all of the workers in the unit were related by blood or marriage, and combined their efforts for the common good of the group. If a boy chopped a cord of wood, it was to help keep him warm in the winter as well as the other members of his family. The young people in these small groups received their vocational education at the hands of immediate relatives who were vitally interested in the progress made. The workers' methods were their own, and they handed trade secrets from father to son. Moreover, each worker carried through a task from beginning to end, or was able to observe other members of his family engaged in related activities. The modern worker's intense preoccupation with a single operation which he repeats over and over again would have been totally incomprehensible to men of this earlier age.

Of course, there was no place for the personnel director, as such, in these relatively small family working units, just as there was no place for a manager who devoted full time to supervision. All persons in the group were essentially workers. Management was an incidental function, exercised by the adults of the group. There was no problem of selecting new workers, because each one was born into the group or introduced by marriage. In a very real sense, one's occupation was inherited. Feeding the workers, housing, training, medical care, provision for disability, or old age, were all taken care of in a very personal and human fashion. Modern industrial, commercial, and governmental organizations, with large staffs of highly trained personnel workers, can do no more. Nevertheless, the germ that now expresses itself in personnel methods was embedded in this early working unit which was synonymous with the family.

Later, under the guild system which flourished during the Middle Ages, the apprentice lived in the home of the master, who ordinarily was not a relative. The degree of proficiency that the apprentice was to attain before he became a full-fledged journeyman was specified by the guild. After the apprentice learned his trade, he exchanged the products of his skill for the products of other workers. The era of specialization had started.

In the home of the master craftsman, the number of workers under his direction was small enough to be rigidly supervised. The apprentices and journeymen lived in the master's house and absorbed not only his craft skill but also the manners and customs of his home. In the early days it was not unusual for a journeyman to marry his master's daughter. No great social gulf existed between the two. The system for the transmission of the social inheritance of the craftsmen was well worked out. As in the family system, the apprentice learned much through imitation of skilled workers. His work was productive, supervised, and he was held to definite standards of accomplishment. The master who failed in his contract with his men was held to account by his guild.

Economic conditions changed and masters and journeymen in the craft guilds were set apart. Members of the two groups no longer worked side by side, or ate at the same table. Political conditions also changed, so that workers ceased to need the protection of the

walled towns. The fifteenth, sixteenth, and seventeenth centuries saw a migration of craftsmen from the mediaeval towns to the rural districts. The country was the source of supply for raw materials for those working in textiles, wood, and leather. This migration sounded the death knell of the craft guilds. The workman plied his trade in his cottage, and also tilled a small plot of ground. This was not a reversion to the family system of manufacture, because, in this later period, the craftsman was a specialist in one or two processes. This was essentially a handicraft era. The worker's chief assets were his skills and trade secrets.

The domestic period of manufacture came to a fairly abrupt close about the middle of the eighteenth century. The generation from 1760 to 1800 saw the introduction of many new inventions that were to revolutionize the whole industrial order and remove the worker definitely from his home to the factory. The spinning jenny, the water frame and mule, and devices for weaving by machinery were patented. Richard Arkwright in 1769 set up a small mill in Nottingham driven by water power. He was progressive and successful and soon owned several mills. John Watt worked out the principles of "circular and parallel motion" in 1782, after which steam rapidly replaced water power in the driving of the new machines. In 1785 Arkwright introduced a steam engine into one of his mills, and definitely originated the factory system of production as it is known today. Arkwright owned the factory and the machinery that it contained. He hired workers to come to his establishment, to work there for a definite number of hours, at certain set tasks, for agreed upon compensation. The finished product was marketed by the owner. In essence, his plant was typical of thousands that are operating today. The workers as one body and the employers as another distinct economic class, were easily recognizable in the social order.

THE MODERN ERA

The factory system of manufacture has dominated our economic life since the middle of the eighteenth century. For almost two hundred years men have been trying to learn to adjust themselves to the demands of a machine age. Workmen have been forced to combine into powerful social and economic units. They have learned how to make their demands clear to their employers. The men who own and control the factories and the tools of production have been learning to master the details of their jobs as managers. They have worked out rules for the purchasing of raw materials, for their manufacture into finished products, and for their distribution. Owners also have learned many things about methods of handling, or managing, forces of employees. The practices relating to the administration of the human factors of production may be classified as personnel procedures. A survey of personnel methods would necessitate a study of management methods that have proved effective in dealing with problems of human relations as they occur under present conditions of employment.

The development of personnel procedures has lagged far behind

the development of production and distribution procedures. There is a strong tendency to attend to financial and material problems before giving serious thought to problems involving personnel. A great forward step in personnel thinking was shown by one of our largest corporations which recently appointed a director of personnel and a works manager, on the same day, to begin work even before the ground was broken for a large mill that will involve the creation of a whole new industrial community. The director of personnel will be working on housing plans, and recruiting his force, even while the plant is being built.

In many modern industrial establishments today, the employer is striving to reduce the barriers between him and his men, rather than spending his energies in maintaining artificial lines of distinction. As he achieves this, he adds to our knowledge of personnel methods. Personnel methods may be considered the lubricant in the present industrial order, since they represent a body of knowledge that aids in establishing efficient and happy working relationships that benefit workers and employers.

OBJECTIVES OF PERSONNEL ADMINISTRATION

What are the aims and objectives of personnel administration? The primary objective of personnel administration is to accomplish certain definite units of work, through the medium of directed human effort, in such a manner that harmonious relationships will be maintained between the members of the working group and between allied working groups. It will help our thinking if we conceive of the working groups as fairly small organizations with the work of each group fitted into that of other groups. In terms of organization structure we have a pyramid composed of many small triangles which represent units made up of a responsible supervisor and the few persons who report directly to him. It is erroneous to refer to an executive as directing the work of hundreds or thousands of persons. Actually, this is not the case. At most a small group, usually less than a score, forms the immediate body of subordinates of any one individual. It is poor organization structure if he attempts personally to supervise the work of great numbers of workers. A good rule for the guidance of management has been enunciated.

"The 'three and seven rule' is a very important one in this matter of division. When one divides, it should, if possible, be into not less than three, and not more than seven parts. If there be less than three, there is a great temptation for the head to interfere and take personal control of one or both the divisions under him. Also, where the divisions are equal in all respects, two is too small a number to get any of the benefits of friendly competition. When the number of divisions is more than seven, there are too many to inspect and control adequately. It is not always possible to divide according to the 'three and seven rule'—geographically or other considerations may forbid; but, where possible, everything should be done to secure it."¹

Modern society, of course, exercises no rigid guardianship over its

¹ E. G. Hart, "The Art and Science of Organization I.," *The Human Factor*, Vol. VII, No. 10, October 1933, pp. 337-338.

workers as was done in the guilds during the Middle Ages. Neither does it provide the carefully supervised training maintained by the craft guilds where the honor of the entire fraternity was brought into disrepute if faulty work was released. One of the objectives of personnel administration is to revive in modern working situations something of the pride in craftsmanship that was characteristic of the guild groups. We need supervisors with the viewpoint of the master craftsmen who will participate in the selection of workers, train them adequately and conscientiously, reward them justly for their work, and develop wholesome and satisfying relationships between the members of the group. To train such supervisors is an outstanding challenge to any executive. The master craftsman of the Middle Ages had his entire working force under his constant supervision in his own home. The supervisor of today can not maintain that degree of close personal relationship. Nevertheless, he succeeds and must be judged by the degree to which he inspires those under his immediate direction to perform work that is praiseworthy. The nearest approach that we have to this ideal is among the scientifically trained personnel who work with singular devotion in the search for truth.

Hersey, at the University of Pennsylvania, recently has obtained ratings from employees on fourteen personnel policies that affected them.²

"The four most important management policies are: (1) Steady Employment; (2) Amount of Pay; (3) Safety; (4) Fair Adjustment of Grievances."

"The four most irritating managerial policies are: (1) Medical and Dental Service; (2) Safety; (3) Insurance Systems and Pensions; (4) Adjustment of Grievances."

Note that "Safety" and "Adjustment of Grievances" appear in both lists. Employees rate those two things high in importance, and also find the methods used most irritating.

Our problem resolves itself, not into the handling of hundreds or thousands of men with machine like precision, but in dealing with small groups, usually less than a score, in an effective, personal fashion that will turn out the work while the workers are getting some degree of satisfaction as a result of their efforts.

PHILOSOPHY AND PRACTICE IN PERSONNEL ADMINISTRATION

There are three foundation stones in the philosophy of personnel administration. They are (a) the recognition of individual differences in ability, (b) the need for training individuals in the tasks, duties, responsibilities and functions that are necessary and which they are capable of performing, and (c) the need for motivating personnel so that abilities that individuals possess will be used to accomplish the personal and group objectives that have been formulated. An adequate personnel philosophy includes the belief that work should be accomplished by a feeling of security and well-being on the part of the individual. He should have the satisfaction of

² Rex B. Hersey, "Employees Rate Plant Policies," *Personnel Journal*, Vol. 16, 1937, pp. 71-80.

believing that he is contributing to a worthwhile enterprise. This may require his participation, not only in the execution of the task, but also in the planning of the details of the assignment of the portions of the work. This sense of "belonging to the group" and "participating in important group activities" can be transmitted only by the supervisor. To the extent that each individual is selected on the basis of ability, adequately trained, and properly motivated to perform tasks that are meaningful and satisfying to him, a satisfactory vocational adjustment has been made. This is an outstanding goal of personnel administration. When each individual can view his work and feel that those conditions are satisfied, personnel administration is in operation in the hands of a skilled supervisor. Strangely enough, when these goals are accomplished, they have the appearance of common sense adjustments between individuals working toward common objectives. The best examples of personnel administration attract little attention to themselves. We should not forget to test our personnel techniques against a sound philosophy of personnel administration.

What are some of the practices and methods that illustrate a sound philosophy of personnel administration? Selection is accomplished most effectively when it is preceded by careful position analysis with definite listing of duties to be performed. Then statements of personal qualifications are made. After that, adequate examinations are prepared and the data contributed by applicants are scrutinized. Through use of these well-established techniques, able personnel is selected. The federal service is far ahead of private industry in the use of modern selection procedures. However, in this field much personnel research still is needed because many qualities such as interest in the work, temperament, and social adaptability can not be measured satisfactorily by the methods now provided by psychologists and other workers in the field. For satisfactory adjustment in a working group, an individual must achieve a fairly high degree of personal acceptability so far as his associates are concerned if he and they are to be happy in the relationship. Although considerable progress has been made in evaluating individual differences, much still remains to be done so that adequate selection of working personnel can be made. This applies even more strongly to the problem of the discovery of development men, or potential administrators. Perhaps the solution to that perplexing problem may lie in the direction of apprenticeships and internships for periods where able young men work very closely with older men who are outstanding for their leadership and administrative skills. Private industry has discovered that not enough able executive material will emerge from the ranks by the "haphazard" method. A systematic procedure for the discovery and development of administrators is needed.

Most of you are familiar with rating scales and their uses. It is an interesting experience to rate oneself and to have half a dozen acquaintances rate one on a comprehensive list of qualities. It is probably as near as we can come to seeing ourselves as others see us. This device in the hands of a sympathetic supervisor can do much to aid a young worker in effecting his own personal adjustment in the

working situation. In recent years techniques for measuring the attitudes of workers have been employed in organizations where great numbers work.³ The outstanding results of such studies have clearly indicated that where poor attitudes exist, the fault was mainly with the quality of the supervision. The man directing fewer than a score of people was the potent factor in expressing or not expressing a sound philosophy of personnel administration. It is true that the workers did not deal in philosophical terms. They reacted to the practices that affected them in their daily working contacts. They reacted negatively to evidences of poor selection, favoritism, inadequate training, discourtesy, the withholding of praise when work was accomplished, and the feeling of insecurity that poor foremanship engendered. When 21,000 employees were interviewed at the Western Electric Company plant at Hawthorne, near Chicago, the effect of supervision upon morale and workers' attitudes was one of the outstanding findings of the study.⁴

The philosophy of personnel administration should express itself in definite terms. For example, the conditions of employment should be known and clearly defined in writing. This involves job analysis for the guidance of the employment interviewers, as well as for the supervisors. It is not enough to specify only the details of the immediate assignment. As the worker is able to see the work of the organization as a whole, he grows in perspective and develops into a potentially more useful employee.

A personnel policy of a company must recognize individual merit and provide for the satisfactions of personal growth and achievement and recognition by one's fellow workers and by the supervisors. These recognitions may take the form of tangible financial rewards or non-financial rewards. Adequate personnel practice should provide for a method of appeal and review to settle differences that may arise between a worker and his supervisor. Each worker enjoys leading upon occasions, and at other times he enjoys acting as a follower. Provision should be made so that he can enjoy the satisfaction at times of being a leader in his own group.

Personnel practices that provide for pleasant activities are based upon sound philosophy. In some organizations these leadership urges are satisfied through voluntary associations such as athletic teams, musical, literary, and dramatic groups, etc. The private in the rear ranks may be the leading bowler in the league and win the acclaim of his associates. He feels that he is important and he knows that his skills are recognized and respected. It is good personnel administration to foster such voluntary associations of employees.

Personnel administration provides the machinery and the technical assistance to make fact finding possible, so that policies may be formulated upon a sound basis. Men get queer hunches regarding the proper methods of selecting, training, and motivating the personnel. Through personnel research, data may be collected and analyzed, so that recommendations based upon facts, rather than upon opinions,

³ Richard Stephen Uhrbrock, "Attitudes of 4430 Employees," *The Journal of Social Psychology*, Vol. 5, 1934, pp. 365-377.

⁴ T. N. Whitehead, *The Industrial Worker* (Harvard University Press, 1938). 2 vols.

may be made. For example, one can determine the optimum age and educational level for each class of positions; the effectiveness of signs and posters in accident and fire reduction and prevention; the value of different methods of presentation used in training courses; the effects of noise, temperature, and humidity upon efficiency; the proper placement of aged and disabled employees; and the attitudes that develop as the result of the adoption of a particular policy. This list of questions can be extended indefinitely. Intelligent personnel administration is characterized by a scientific attitude toward questions involving the well-being and happiness of employees.

An important objective of personnel administration is to provide advice to administrators, pointing out practices, from an organization standpoint, that have been successful or that have failed in other situations. Many personnel difficulties are due to faulty organization. Supervisors may have too many men reporting to them, or lines of authority may not be well defined. In companies where organization charts are not provided, or kept up to date, it is not unusual to find men and women who actually do not know whom they report to. During the process of making job analysis studies, this condition sometimes is revealed; workers will state that their work is under the direction of one person, when the management actually conceives the organization to be upon a different basis. Each operating unit, bureau, or department should have an organization chart upon display, showing position names and the names of incumbents. It should be clear to each worker, and to his fellow-workers, just where he fits into the organization structure. And so, an important objective of personnel administration is to build and maintain an adequate organization structure, that will provide for the functions and responsibilities of the operating unit, by assigning proper personnel to the different portions of the organization. This becomes the framework of good personnel organization when supported by adequate man analysis and position specifications.

When personnel problems arise, as they do in every organization, the supervisor is in a strategic position if he has a clear knowledge of the places occupied in the organization pattern by the persons involved; if he understands the nature of their duties as stated in job specifications covering those positions; and if he is aware of the personal qualifications, limitations, and ambitions of the personnel under consideration. Then he can view personnel problems in a systematic fashion, instead of reacting to each new situation as a unique unit.

Good personnel administration starts at the top of the organization. It expresses itself at each level in better understanding of the details that make up the jobs that are supervised, and a closer knowledge of the qualifications and personal qualities of those supervised. For adequate administration, organization charts should be kept up to date, position analysis should be repeated at appropriate intervals, and personal qualifications of incumbents should be reviewed at least semi-annually by operating heads. This requires constant attention to the machinery of personnel administration by a permanent staff of competent workers. Their real function is one of counseling and

advising. Effective personnel administration is a major responsibility of each executive, department head, chief, supervisor, or other person who plans and coordinates the work of others.

SUMMARY

There are twelve main objectives in personnel administration (or administrative management). All are important. The particular order in which they are stated is not of special significance. They are:

1. To accomplish certain definite units of work, through the medium of directed human effort, in such a manner that harmonious relationships will be maintained between the members of the working group, and between allied working groups.
2. To substitute scientific procedures for impressionistic methods in formulating policies affecting personnel.
3. To supply factual material, so that adequate wage adjustments can be made promptly.
4. To introduce practices that will increase the satisfaction of the worker in his work.
5. To supply operating heads with advice and counsel regarding personnel practices that apply in a given situation relating to personnel.
6. To recognize individual differences in ability and provide for the utilization of special skills. This applies particularly to the discovery and development of leadership qualities that exist in the group of junior workers, so that a continuous supply of able administrators will be available.
7. To contribute to the development of proper organization structure.
8. To increase the effectiveness of the supervision of small groups of workers.
9. To introduce training methods that are adequate to the needs of the organization.
10. To motivate personnel so that abilities that individuals possess will be used to accomplish the personal and group objectives that have been formulated.
11. To develop morale, and increase the feeling of security and "worth-whileness" of the work.
12. To encourage free discussion of personnel philosophy, methods, and practices on the part of all interested persons.

DISCUSSION

In the industrial world over-emphasis of work production in contrast with satisfaction of the worker may be characterized as an evil slowly giving way before the demands of the organized workers and more enlightened personnel management.

In the government, such over-emphasis has never existed to an extent warranting characterization as a serious evil. We, however, are striving for more enlightened personnel management, recognizing fully both the need and its possibilities for improved public service.

Certain industrial controls that will operate more or less automatically to prevent a swing of the pendulum in this new and happy direction to the point of self-destruction are not present in the governmental set-up. Let us seek the solid middle ground.

In Dr. Uhrbrock's philosophy of personnel administration, we find three foundation stones: (1) selection, (2) training, and (3) motivation. In considering the application of this philosophy to the federal Civil Service, this group of employees would add a fourth support—namely, a humane but sound operating system for elimination of the unfit. The rolls of any typical long established federal agency today will be found clogged at numerous important points with workers who simply can not carry successfully their part of the load. Some of these cases are due solely to infirmities or advanced age, and for these we may look forward hopefully to more liberal retirement provisions as the proper remedy. A much larger number may be charged fairly to our own failure in selection, training, or motivation. And finally, there are those whose qualifications warranted original selection, but in spite of any practicable steps in training or motivation are or would still be handicaps to the organization or unit in which employed. Our jobs, most of them, constantly grow. Some of us simply lack the capacity to grow with them. As our processes of selection, training and motivation improve, we may expect a gradual reduction in the second group. But the third group and to some extent the second will always be with us, and toward them a large measure of the effort of our newly recognized personnel executives should be directed.

In governmental work, executives and personnel managers sooner or later are harassed by the problem created by an employee who in some serious respect fails to respond to the best of personnel management that can be provided. Perhaps most executives try to ignore such unhappy cases unless they first get thoroughly exasperated. It is a thoroughly human attitude to shrink from any real handling of such cases. But to shrink from them means that the unit of organization for which an executive is responsible is weakened just that much for the tests which it must meet.

But what to do? How to handle such cases? That is the question.

An analogy for the correct method may be found in log driving practice. When logs were mostly transported by river currents, crews of men had to be employed to roll out the logs, usually large and heavy, which would hang up on banks and in shallow places. A crew of men, straining to roll a log out to where it would float again, always tried to get the upper end ahead so that the stream current could get behind the log and help them. Then when the current took hold and the straining crew could leave most of the work to it, some cheerful soul would raise the cry—"let the water do the work."

Whether dealing directly with a subordinate with a clouded record or with a committee of his organization which is pressing his case, the disagreeable duty is always made easier if "let the facts do the work" is made the governing principle. Here is this fact and that, what can we say and do about them? Here are the attitudes of this authority and that, how shall they be met? Here are the adverse aspects of your record. Are they true? If so, can you expect them to be tolerated longer?

If equipped at the start with a good grasp of the *apparent* facts of a case, candor, good natured persistence and thoroughness, an unbiased mind and a desire only to serve the organization, and if possible the interests of the employee also, an executive will usually find the employee and himself *working together* for the solution of such a conflict, which handled otherwise would breed endless ill-will and trouble. But his motto must be "let the facts do the work."

It is interesting to observe how Dr. Uhrbrock simplifies the personnel problem by breaking it down into groups. No one directs a million employees, or a thousand employees, or even a hundred. Each executive has his own small group which is no larger now than when the world was organized on a simpler scale. In the first industrial era, no one had heard of the "three and seven rule" but groups were necessarily small. Likewise, in good management they are small today. The President has his group that he personally directs—more than seven perhaps, but still not many; the Secretary deals actually not with the eighty thousand workers in the Department of Agriculture, but with only a small group, his staff; likewise, the Bureau Chief, the Division Chief, the Section Chief, and so on to the bottom group. This breaking down enables us to think of personnel problems in understandable terms. Each of us has to learn to deal with only a dozen or so workers.

Isn't this what we were trying to get at in relation to Mr. Tead's discussion of planning and management? No one can "manage" or plan the work

for a million employees. But break it up. There will be thousands of plans for thousands of situations all up and down the line, each in its own sphere. The Chief plans, the Division Chief plans, and each of us plans for his own job. And after all, why is it called "regimentation" if done in government and "good management" if done in industry?

Dr. Uhrbrock's twelve major objectives are entirely susceptible of practical application on governmental work. In his first one, the element of cost might well be injected, as it was in Mr. Tead's introductory lecture. We must accomplish certain definite units of work, we must have satisfied personnel in harmonious relationships, but also we must attain these within cost limits which the taxpayer may fairly be expected to approve.

As to the second objective, we shall have to remember that the substitution of scientific procedures for impressionistic methods can never be complete. Human nature many times defies the purely scientific approach.

Again, in the Doctor's statement of objectives, there would seem to be some place for a more positive recognition of the need for keeping the personnel channels cleared of deadwood.

LECTURE III

HISTORY AND PRINCIPLES OF MANAGEMENT

By H. S. PERSON

INTRODUCTION

IT is very convenient to have joined, as subjects for discussion this afternoon, both the history and the principles of management. A rather extended experience has convinced me that there is no better method of exposition of the principles of management than to trace the progress of the experience, experiments and analyses which have made possible the formulation of principles.

Management has always been a problem. Concerned with the discovery of ways and manipulation of means to the achievement of purposes, by its very nature it was a problem to the first man. The earliest records of every society, no matter how primitive, indicate this.

Whatever we shall have to say about the history of management must be selective and refer only to a brief recent period which can offer something of special value for us. There is a very convenient point of beginning. We became generally conscious of management as a problem in the 1880's, and about that time what we call the management movement emerged. There had been a few prior isolated books and pamphlets on some phases of management, but in the 1880's there was the beginning of public discussion, and of a literature that has increased at an accelerating rate.

For convenience, we mark the beginning of the management movement by the paper, "The Engineer as Economist," presented in 1886 by Henry R. Towne before the then recently organized American Society of Mechanical Engineers.

Thereafter for a period of some twenty years the management movement consisted of two parallel and only remotely related lines of development: that represented by discussions at meetings of the American Society of Mechanical Engineers; and that represented by the work of Frederick W. Taylor. The line represented by the American Society of Mechanical Engineers was generally a discussion of experiences and a priori assumptions; the line represented by Taylor was the more definite, scientific, and fundamental. However, the latter attracted little attention until after the turn of the century. In fact, it was the testimony concerning it at the Eastern Rate Case hearings before the Interstate Commerce Commission during the winter of 1910-1911 that gave the Taylor technique, or Scientific Management, its dominant position in the management movement. Since then the management movement has pivoted on Scientific Management, and its principles and technique have been more or less faithful expressions of Taylor principles and technique.

BACKGROUND OF THE MANAGEMENT MOVEMENT

A "movement" does not emerge until there is first, a sufficiently widespread consciousness of a common problem, and second, a medium or forum of inter-communication for those conscious of the problem. Industrial conditions following the Civil War presented the common problem of management; the mechanical engineers—a new group who were at that time chiefly plant executives and had not yet become free-lance practitioners—were those who became articulately conscious of the management problem; and the meetings of the newly organized American Society of Mechanical Engineers afforded the forum on which they could be articulate. Executives other than engineers had no forums through which to be articulate.

The Civil War and its aftermath, like the recent World War, directly and indirectly brought notable changes in industrial conditions in the United States. Sufficient for our purpose are the following items: it intensified investments in and development of the mechanized industries; it brought into being a profession of inventive mechanical engineers; it induced the beginnings of concentration in industry, larger plants, and especially larger and a greater variety of machines; it cleared the way for and induced transcontinental railroad construction; it encouraged the settlement of western areas by discharged soldiers and promoted the westward movement generally; it broke down small regional markets and consolidated them into an essentially national market; it brought on a depression. By the 1880's, American industrialists realized that managing a business in a period of such rapid change was something different and difficult. Especially were they concerned about these new machines as devices for meeting the demand of the enlarged market: what they would do; how to install and operate them; in particular, how to organize and supervise a working force scattered among and tending these new machines.

They put their problems up to the engineers, who were, as I have said, generally attached to and executives in the iron and steel, machine-tool, metal working and mechanized industries. The engineers were the executives who were inventing, designing, manufacturing, selling and installing the new equipments. What more natural than to put up to them the problems of organizing operations after installation of these new machines?

And what was more natural than that the engineers should turn to their newly organized forum for discussion of these problems and interchange of experience? The American Society of Mechanical Engineers was organized in 1881. In 1886 Henry R. Towne, who had as a young man worked on the construction of the Monitor, conqueror of the Merrimac, and was then, in cooperation with a certain Mr. Yale, laying the foundations of the great Yale and Towne Manufacturing Company, presented his paper at a meeting of the American Society of Mechanical Engineers on "The Engineer as Economist." He argued that the engineer was concerned not merely with invention, design and installation of machines; he must assume responsibility for organizing the operation of machines so that their use would be efficient and profitable.

THE MANAGEMENT MOVEMENT—A. S. M. E. INFLUENCE

The *Transactions of the American Society of Mechanical Engineers* and *The Engineering Magazine* thereupon became and for some twenty-five years remained the sole literature of management, not only in the United States but in the world. Management was not at first discussed as an integrated body of principles or of inter-locking methods—that did not come until towards the end of the period—but as a succession of isolated problems. Nor was it discussed as a matter for scientific investigation—that did not come until after the impact of Taylor. It was a period of discussions of experience and, more especially, of devices and methods suggested by experience.

Three outstanding items of interest were brought up successively during the quarter century between 1886 and 1910, and these became permanent parts of the discussions of the management movement.

The first of these was the matter of wage incentives. Most of the differential systems of wage payment—payment according to output—were conceived at that time; the Halsey premium system; the Towne-Halsey system; the Rowan system, etc. It appears as though the first thought about how to organize work at machines and get output that would insure a return on investment, and at the same time solve the problem of supervision, was to induce the workers to supervise themselves by the device of making them take individual responsibility for individual output and accept remuneration in terms of output. This phase of management still remains a subject of critical discussion.

The second problem to come up for intensive discussion some eight to ten years later was cost accounting. It is my inference that this grew out of the discussions of wage systems. After differences among wage systems had been discussed a priori for a time, the participants began to compare them in terms of cost experience. This made inevitable a consideration of modes of recording and analyzing cost experience.

And eight or ten years later an inevitable third problem claimed a place in discussion. This was organization and system. My inference in this connection is that as soon as discussions of wage methods in the light of cost accounting, and discussions of cost accounting itself, had continued for a certain time, it was perceived that another important variable must be considered: that for any system of wage payment different results were realized if there were differences in organization and methods. Thus organization and methods became the third subject of dominant interest. The management literature of the first decade of this century is full of organization charts; and in the early years of the decade, the first distinctly management magazine—*System*—was founded.

It is apparent that the management movement, as represented by discussions before the American Society of Mechanical Engineers, took up problems as though they were isolated; but discussion soon revealed that they really were inter-related and discussion of one merged into discussion of another. The movement was well on the way towards development of a concept of management as a coordi-

nated whole of principles and methods. It was at this point—towards the close of this decade—that the Taylor System—Scientific Management—made its decisive impact on the movement, and gave it a comprehensive technique and body of principles.

THE MANAGEMENT MOVEMENT—TAYLOR INFLUENCE

In 1878 Frederick W. Taylor got a job as yard laborer at the Midvale Steel Company, Philadelphia. He had graduated from Phillips Exeter Academy with the intention of studying law at Harvard, and actually had passed the Harvard entrance examinations, but serious impairment of his eyesight had compelled him to relinquish that ambition. So he turned to manual labor and completed apprenticeships as machinist and pattern maker in a small machine shop in Philadelphia.

By 1886 he was chief engineer at Midvale, having in eight years mounted successively the following steps: yard laborer, time keeper, machinist, assistant foreman (gang boss), foreman, assistant engineer, chief engineer. On the side, by night study, he pursued courses offered by Stevens Institute and earned the M.E. degree. Also during the eight years he worked out the management technique, in simple but complete form, which came to be identified as Scientific Management. The story of these early stages in the development of Scientific Management is fascinatingly told in Copley's life of Taylor.

These few facts are indicative of the emergence of a genius. Respecting that genius the late Charles de Freminville, a distinguished French engineer, said that Taylor brought the inductive method to bear on the homely day-to-day problems of the shop. He replaced hunch and guess and rule of thumb by scientific research, standards, planning and elimination of waste. The influence of bringing the inductive method to bear on the problems of the shop has had the result of bringing them to bear also, through others influenced by Scientific Management in production, on marketing and general administration, on accounting and budgeting, on every phase of management. The technical internal management of practically all successful enterprises in the United States, in most of western Europe, in Japan and the U. S. S. R., has been revolutionized by Scientific Management. In some countries even the management of government activities has been influenced and improved.

When young Taylor was appointed gang boss over a group of men working on lathes, he started out ambitiously to get better production by the only foremanship technique then known in the industry—the strong-arm and strong-tongue method. He knew that individual productivity was extremely low, for he had been one of the workers himself. A bitter struggle with his workers ensued. It was not a credit to either side. Young Taylor won out, but the experience hurt his sensitive nature. Resolving to find a remedy for such situations or get out of industry, he thought the matter through to the conclusion that the workers were not primarily to blame for the low productivity; that there were reasonable explanations for their attitude of mind; that the principal blame rested on manage-

ment because of the fact that management, although it was in a position to find out, did not know what was a proper day's work and what it had a right to expect from workers; that knowledge shared with the workers should take the place of force.

The young Taylor had a passion and a genius for research. He went to the general manager of Midvale, William Sellers, who was a leading engineer-executive with a passion for experiment, and secured permission to withdraw a machine and a worker from productive work for experimental work, and to draw needed material from a pile of scrap steel in the yards.

Taylor's purpose was to study every condition constituting and surrounding an operation with a view to discovering the relative productivity of various conditions, productivity meaning units of output in a unit of time. He followed the strictly scientific method of holding all variables steady except one, observing and recording the effect of changes in that variable, and studying in this manner the influence of all possible changes in all variables.

In an astonishingly short time he discovered a "best" condition for each variable for each operation: for shafts, belts, each setting on a machine, condition of material, method of handling the machine, and so on. Some of these "bests"—for instance, the condition of a belt or the setting of a machine—in themselves caused striking increases in output; all "bests" together, in accordance with the geometric-like influence of a series of dependent "bests," caused amazing increases of output. These increases were not only without greater exertion on the part of the worker, but actually with less exertion, for the same reason that an expert golf player gets more effective results with less fatigue from the series of dependent "bests" which constitute his skill, than does the unskilled amateur from his strenuous exertions.

Notice here the introduction of two new factors into management: (1) scientific research; (2) standards (i.e. "bests").

However, practical use of these standards remained a gigantic problem. How could Taylor use throughout a shop, rationally and equitably, output standards based on experiments on a machine which in the course of the experiments had become perfectly conditioned and tuned? Instead of throwing away the standards as useless, he attacked the problem of bringing all the machines in the shop to the same perfect condition as the experimental machine. This led to the establishment of the first functional foreman. He specialized the function of keeping machines in condition. He relieved each operative of that responsibility for his respective machine, and assigned it to a foreman who should be responsible for the condition of all machines. Functional foremanship, which later came to embrace other functions, was essentially a device for the maintenance of standards—of "bests."

Taylor spent many years on experiments of the kind we have described, as new operations came under his supervision; but with respect to the relatively simple operations of these early years at Midvale, he within a few months was able to secure operation of the machines in accordance with an instruction card (specification of the

particular "bests") for each operation, secure greater productivity and lower unit costs, and pay higher wages. The giving of all detailed facts to workers through their participation in the experiments and through instruction cards, plus higher wages, resulted in a new atmosphere of relationship, and never again did Taylor have controversy with workers under his supervision.

The utilization of experiment and other forms of research as means of determining standards, and the maintenance of perfectly conditioned machines to make possible the practical use of higher standards; these are only part of the new technique of management developed in those early days by the young Taylor. In fact, some would insist that these were only the foundations of a new management, and that the new management is expressed in the procedures which the command of standards made possible.

The time study data made it possible to calculate in advance, with a dependable degree of accuracy, what time would be required for any operation; what the materials, machine-time and labor costs would be; when delivery could be made; and of especial importance, when the machine would be freed for another operation. Knowing when the machine would be free for another operation, it was possible to plan ahead what the next operation should be, get the materials and necessary tools to the machine in advance, prepare the instruction card, and by such prearrangements enable the worker to start the next operation without an interval of costly idle machine time and labor time. Resultant uninterrupted of the flow of work to each machine, and from one machine to another in series, produced an amazing increase of output for all machines together over a period of a day or week. In fact, the larger part of the increased productivity characteristic of the scientific management technique is in most instances the consequence of this continuous flow of work more than of the increased output at the individual work place.

Planning of this simpler kind is not all the story. The factors which make possible the kind of planning I have described, also make possible planning the allocation of machines to different operations and the assignment of skills to different operations in such manner that facilities will be applied with precision to the production of just those items in the proper quantities at the proper times called for by the variation in the flow of orders coming in through the sales department. This makes unnecessary the risky piling up of finished-product inventories.

In a later meeting Colonel Babcock will discuss such matters as these. I now tell you something on Colonel Babcock that his modesty may not permit him to tell on himself. I once visited him at an automobile plant of which he was the industrial engineer—it happened to be when a change of model was imminent—and he had the exact costs of the new model before one had been made. In ordinary management one makes a new item for a period, then adds up the cumulated costs, divides this by the number of items produced, and in this manner ascertains what the cost *has been*. But Colonel Babcock knew exactly what combination of unit items would be involved in making the new model, he had a file of standard times and standard

costs for each of these units, and with these unit data he could calculate exactly what the cost of the new combination of units *would be*. This is important to pricing policy and policy in competition generally. Colonel Babcock has the distinguished record, in another plant, of having planned and scheduled, each 2 to 4 months in advance of performance, over 2 million operations within a period of $3\frac{1}{4}$ years, every one of which came through as scheduled.

This planning and scheduling of related activities are identified generally by the term "control"—control of operations. This control, and the antecedent accumulation of the data which make it possible, requires elaborate files and a large amount of calculating and other forms of desk work. These require a place where quiet, cleanliness and orderliness prevail. This place is called the planning room, and the staff engaged in these activities, the planning department. At Midvale, Taylor with one or two assistants did these things himself as part of his foreman's or engineer's duties; but at Bethlehem about 1890, because of the more varied operations and their greater number, he established the first functionalized planning staff with its separate quarters.

These developments of the Taylor technique began about 1880 or 1881 and continued as a more or less isolated phase of the management movement until the winter of 1910-1911. It is true that many executives visited the plants where Taylor was directing these developments, but they came away without perceiving their significance. It is true that as a member of the American Society of Mechanical Engineers Taylor presented several papers which have become classics—notably, A Piece Rate System, On the Art of Cutting Metals, and Shop Management—but the discussors practically dismissed his contributions with "it can't be done." Then in 1910-1911 came the Eastern Rate Case hearings. The leading attorney for the shippers—Louis D. Brandies, now an Associate Justice of the Supreme Court—argued that the railroads had no right to demand higher rates to offset a wage increase until they had exhausted every effort to offset the increase by more efficient management; he brought witnesses from industrial plants to describe what the Taylor methods had accomplished in them; the term "Scientific Management" was devised for identification of this technique of management; the testimony was startling, and for months it and special articles commanded the press and popular magazines; the whole world of industry was responsive and a new little book by Taylor—The Principles of Scientific Management—was promptly translated into more than a dozen languages. In short, Scientific Management took its place in the main stream of the management movement, and because of its logic, vitality and comprehensiveness came to dominate it. Scientific Management gave the movement an integrated body of technique, a set of principles, and a philosophy.

THE PRINCIPLES OF SCIENTIFIC MANAGEMENT

What these principles of scientific management are must have become apparent to many of you during the course of this narration of

the development of the Taylor technique of management. Let us state them briefly:

1. *Research* is essential to precise and economical management; it substitutes constants for variables, and replaces hunch and guess by relative certainty; it discovers and defines desirable and practicable objectives, and the most effective, economical and dependable ways and means of their achievement.

2. The results of research must be made usable to the particular managerial situation by their translation into the terminology and adaptation to the operations of the situation. They must reflect the units of functional activity involved. These elements of managerial information are called *standards*.

3. These standards must be the basis for the conduct of operations, the informational force which directs activities into desired channels for the achievement of predetermined results; they permit achievement of results with the minimum expenditure of the human and physical energies involved. This organized predetermination and coordination of activities is called *control through planning*.

4. A high degree of *cooperation* is required by all individuals participating in achievement of the objectives through the ways and means indicated in the planning, for each element of the plan presupposes, and its effectiveness is dependent on, the precise execution of each of the other predetermined elements of the plan. A plan as a whole must be considered by all participants as a group of impersonal, research-determined laws which must be observed.

Perhaps attention should be called particularly to this last principle. There is no technique of management so subject to sabotage as Scientific Management. As in a foot-ball game, if one participant fails in the precise execution of his part of a play, the whole play may be a failure. As in foot-ball, the whole is a group of specialized contributory efforts that dove-tail one into another, and the failure of one impairs the whole. It is for this reason that an enterprise that would develop Scientific Management in its operations, must at the same time develop the best of relations among executives and operatives and between employer and employees; it is for this reason that generally the recorded advances towards better relations within industry are actually found to have been developed in plants where Scientific Management has been established.

EXTENSION OF APPLICATION OF THE PRINCIPLES

Taylor was concerned almost exclusively with production; in his day American industry was enjoying a sellers' market and the dominant management problem was to get production; therefore, the mechanisms he developed were those pertaining to production.

The World War, however, disorganized the economic system to such an extent that many basic industries were thrown into a buyers' market. This disorganization also multiplied and complicated the problems of chief executives—of what is called general administration. Even earlier the problem of employer-employee relations had

become more complicated throughout industry generally. These forces caused a general search for basic principles and improved methods of management. The only formulated philosophy, principles and technique of management was to be found in Scientific Management. There was much searching of these principles which had been developed in production, and they were found to have general validity and application. There was much experiment with the mechanisms, and they were found to be highly adaptable. For these reasons, there has been during the past two decades noteworthy extension of Scientific Management into the fields of employer-employee relations, marketing and general administration.

In the U. S. S. R. there is effort to apply them in the management of a socialistic society. In Japan, Italy and Germany there is effort to apply them in dictatorial or oligarchic military societies. In the United States we are making the beginning of efforts to apply them in a democratic society. The increasingly complicated nature of our social institutions requires a reign of law based on something more fundamental than hunch and guess and chance. Our success or failure will be a momentous event in world history.

There follows a reproduction of a tabular presentation, which I once prepared for another occasion, relating: the principles of scientific management (the vertical column at the extreme left); the phases of management to which these have come to be applied (the numbered vertical columns); and the principal mechanisms of management through which each principle has been applied to each phase of management (at the intersections of horizontal and vertical columns). In the light of our discussion further explanation of this tabular presentation appears not to be necessary.

SCIENTIFIC MANAGEMENT IN PERSPECTIVE

As a Means of Achieving Progressive Stabilization

GENERAL PRINCIPLES	MAJOR ITEMS OF TECHNIQUE IN INDIVIDUAL ENTERPRISE		
	1. Work-Place	2. Shop	3. Personnel
RESEARCH in Its Various Forms Is the Approach to Solution of All Problems of Management.	Engineering Studies in design of equipment. Economic studies in size and output of machines. Methods study Time study Motion study Studies in behavior of materials Studies of skill	Studies of the relations of facilities and classes of skills available at the various work-places, and of the most effective co-ordination and proportioning of them under varying conditions of the kind and quantity of orders flowing into the shop.	Studies in mental and manual aptitudes Studies in personality requirements of various jobs Studies in emotional conditions and reactions Studies of group organizations
STANDARDIZATION Provides the Basis of Understanding Necessary to Co-operative Effort, Through Formulation of Purposes, Policies, Plans, Projects, Facilities, Methods, Conditions, Etc., Which Become Constant Factors in Planning and Execution.	Specifications of Materials Machines Tools and apparatus Product Unit times Methods Jobs Conditions Wage rates Quality Quantity	Specifications covering co-ordination, proportioning and application of skills and facilities under various specified conditions of the kinds and quantities of work. Production schedules	Specifications of personality requirements for various jobs Specifications relating to hiring, promotion and discharge Specifications relating to training and sharing of information Specifications relating to personal and group relations
CONTROL Is Effected by Co-operative Observance of the "Laws" Inherent in the Situation, Discovered by Research and Made Practical by Formulation in Terms of Standards.	Provision of materials and tools Specification of jobs or operations Inspection of product Inspection of performance	Functional separation of planning and execution Classification of operations Analysis of orders Routing; the analysis of the sequence of operations on a job Scheduling or assignment of operations to various work-places in accordance with routing Inspection: products, results, cost	Systematic intelligent direction of conduct in accordance with specifications indicated above
CO-OPERATION as a Mental Attitude Is a Condition of Efficient Common Effort, and as a Mode of Conduct Is the Result of the Formulation of Standards of Purpose, Facility, Method and Relationship.	As a condition and as a result, co-operation is promoted by the combination of all factors in the total situation: understanding and acceptance of the common purpose; instruction and the understanding of details; acceptance and performance of complementary responsibilities; proper		

From "Scientific Management as a Philosophy and Technique of Progressive Industrial Stabilization," by H. S. Person, Managing Director of the Taylor Society, New York, presented at the Congress on Social Economic Planning under the auspices of the International Industrial Relations Association, Amsterdam, Holland, August 24, 1931.

The order from left to right indicates roughly: (1) chronological development;
(2) application to expanding managerial areas.

MAJOR ITEMS OF TECHNIQUE IN INDIVIDUAL ENTERPRISE			COLLECTIVE ENTERPRISE
4. Marketing	5. Finance	6. Gen. Administration	
<p>Market analysis Quantitative Qualitative Studies of consumer demand Studies of the channels of distribution Studies in methods of selling Studies in sales promotion Studies of competition</p> <p>Specifications Sales schedules Quotas: territorial commodity and personal Channels of distribution Methods of selling Prices Discounts Salaries and commissions</p> <p>Functional separation of planning and execution</p>	<p>Most of data required by this department are procured by other departments, e.g., costs Studies of market for capital Studies of customers credits and collections Studies of prices of materials when purchasing is speculative instead of routine (e.g., cotton, rubber) Studies of financial ratios</p> <p>Specifications Standard costs Financial ratios</p> <p>Inspection of financial aspects of management in terms of various ratios</p>	<p>Studies of the state and tendency of— Industry generally The particular industry The particular enterprise Industrial forecasting Studies of managerial operating ratios All researches of all departments contribute to the information required by general administration</p> <p>Specifications of Policy Projects Plans Master schedules Master budgets Operating ratios Ratios of relationship to the industry generally</p> <p>Inspection of: Conformity of operations to budgets and schedules Special attention to exceptional situations Prompt decisions concerning changes in purpose and policy</p>	<p>Scientific management has not been applied to the stabilization of industry on national and international planes, although experiments pointing in that direction have been initiated. These experiments, however, are not free from simultaneous experimentation in other fields of social organization.</p>
<p>selection, assignment and promotion of personnel; provision of adequate facilities; just sharing of the joint economic rewards; humane personal relations; steady provision of work to be done.</p>			

DISCUSSION

It may readily be admitted that the principles of management so clearly set forth by Dr. Person have done and may do much for the world of factories and machines. But these principles may seem very far away from the problems of government workers and executives. Even though machines and machine products, themselves the result of the application of management principles, are a familiar and prominent part of every government activity, how may the principles of management be applied to the work that we have to do? Government work is primarily a thinking job. What use has it for principles developed around the machine?

It is probable that none of us realizes the extent to which management principles have penetrated into the work we all do. Consider the vast, intangible job of the AAA. What has it done, or what is it doing that does not fall readily under Dr. Person's fundamental principles—research, standardization, control through planning, and cooperation? Or to put it another way, could the AAA have possibly done its job without a rigorous application of every one of these flexible principles?

The significant thing is not that there is so much of management principles in government work, but rather that so much more could be accomplished with so much less effort if the principles were applied consciously and with the skill born of an intimate familiarity with those principles and training in their application.

To the individual executive who has never taken much interest in management, Dr. Person has supplied four terms which it is readily possible to remember and add to one's permanent mental equipment. And lustily helps those four may be if applied to problems and work situations as they arise. "Research, standardization, control through planning, and cooperation."

In his concluding remarks, Dr. Person mentions the publication of management principles in Japan and other countries, and the difficulty of applying them in a democracy such as ours. But is he not thinking of their application to top-management, where politics plays its part? This may or may not be so; and just how important is it anyhow? The thing that is important and the thing that concerns our group as employees is their application to the activities of government in our own and similar situations.

We have already mentioned the AAA. Next week Colonel Babcock will tell us something of their application in REA. Several in our group have participated in the development of their application to the administration of federally owned forests.

Here the scientific management approach began to make itself evident in widely separated units as early as 1916. Its beginnings were, as Dr. Person would have them, in the form of research, particularly in qualitative and quantitative analyses of the work of the key executive positions. These led naturally enough into studies of the forest properties themselves, the physical facts and situations from which the recurrent and development jobs for the executives arose, resource inventories and plans, social-economic relationships and forecasts of public use and of demands for public service.

Standardization, easily overdone in an enterprise covering so vast a territory and encountering so wide a variety of working conditions, is nevertheless in its appropriate sense made even more necessary by these same conditions, than in a compact industrial set-up. It came in, as the result of the administrative research, and continues as the fruits of continuing studies are made available. The laws and the original regulations implementing the statutes and with them governing the enterprise came largely "down from the top" and constituted basic standards of policy. Next came the growing flow "from the bottom" of experience, experiments, and analyses, with the ultimate fruit not yet fully available of comprehensive nation-wide standards of policy and practice, localized standards in regions, and the complete list of recurrent executive jobs and the individual job standards.

Long-term project inventories, annual executive and clerical work load analyses in standard forms, simple current plans and schedules are in steadily more effective use as the foundations for control which, as in Dr. Person's chart, is largely cooperative observance and inspection of conformity to plans, budgets and schedules. Flexibility, freedom of adjustment, authority to act as any

situation requires, initiative, ingenuity are in no way restricted. As a matter of fact, the cooperative effort at all levels of administration to shape the tool of scientific management to the work being managed constitutes a constant challenge and stimulation to the best executive talent.

To a degree much more than warranting the effort to date we see such worthwhile fruits as:

1. Vitalized objectives.
2. Executive effort in a many-sided program more soundly guided toward objectives.
3. Better balanced, more smoothly operating organization units.
4. Fuller release of individual capacities.
5. Positions more interesting and satisfying.
6. Fairer distribution of work loads.
7. Clearer recognition of training needs.
8. Sounder basis for judging performance.
9. Stronger basis for unit financing.
10. Past experience contributing more fully to future needs and problems.

Why are not government activities a truer and better field for a whole-hearted realistic application of these principles than is industry?

LECTURE IV

THE MECHANISMS OF MANAGEMENT

By COL. GEORGE BABCOCK

MANAGEMENT mechanisms are devices for conveying to personnel conducting an enterprise information regarding management policies and plans for performance procedures. They are used to develop, establish and maintain operating facilities.

Generally management plans will define the performance or product to be accomplished and when, where and how it will be attained.

By mechanisms of letters, telephone, telegraph, drawings, forms, procedures and regulations, the plans are put in operation.

Added and generally more elaborate machinery is required to co-ordinate the activities of management and operating personnel with regard to:

Routing: the direction work shall take through the departments and the stations at which it shall be performed.

Schedule: establish the date for arrival at and departure from each work station.

Dispatch: the movement of work over the routing such that the dates as scheduled will be regularly met.

The responsibility and authority of the Management Engineer are closely related to these three activities in that he plans for and establishes the mechanisms that are required for these purposes. He frequently plans the organization relations of personnel, and develops personnel, accounting, and often sales procedures. However, if his title is not a misnomer, effectiveness will usually be greatest when attention is largely devoted to the three first herein mentioned subjects.

These phases of management planning have so generally been unskillfully or incompletely done that otherwise appropriate management plans have in practice failed to mature. The prime cause of failure is a lack of understanding by the planner of the technique involved in the work to be done. He may not design the mechanisms most appropriate for this particular work but finds when applied that the plan, instead of producing product, turns out a generous run of red tape. I am convinced that until the person responsible for the designs of mechanisms for management becomes intimately acquainted with the features of the work to be done he can not expect satisfactory results. You can't buy genuine management from a shelf, though unfortunately substitutes are still for package sale.

Not uncommonly a new enterprise will first organize personnel down almost to the last employee before the operating plans are thoroughly worked out. Such an approach is less effective than it would be after an exact operating program has been developed. Then, and only then, can the management organization be perfected and management mechanisms be most appropriately designed and operated.

The natural tendency is to set up an organization: that is the first thing thought of. "Let's have an Engineering Department"; "let's have a Legal Department"; "let's have this and that function" and usually chancing such need, though not knowing the want, yet they "set them up."

The preliminary study of the program, the determination of how that program shall be handled, the personnel weightings for the program (i.e., "how many" will be needed and *the* particular classifications required) provide when the organization is established for the number of personnel most appropriate for that work and best fitted to do that work. The mechanisms required by that personnel in kind and number can then be selected to meet program requirements; until that program is thoroughly understood and the technique required for the work is known, I am convinced that no thorough job of management engineering can be applied; that soon the selected mechanisms are very liable to be found on a shelf and covered with dust.

Frederick W. Taylor was a scientist and engineer determined to search out the facts in every phenomenon that interested him, with the result that for practically everything he studied, fundamental conclusions were reached. His research in the art of machine cutting of metals concluded with established standards for the most appropriate size and form of metal cutting tool, the best material from which to make it, and the best cutting feeds and speeds for operation. Modern "High Speed Steel" used for metal cutting tools resulted from this research. Probably no revolution has been greater in American industry than in that period of time when high-speed steel was first used requiring increased power, and changes of speed mechanisms of machines on which it was used. He developed grasses for golf fairway and putting green that had never before been known for hard use and lovely color.

Dr. Taylor lived at "Boxley" on Chestnut Hill, Philadelphia, where in a greenhouse there were approximately 1,800 grass sod samples: i.e., cylinders cut from soil from world locations where good grass was growing. These cylinders were cased in glass bottles and were carefully studied as to soil structure and botanical characteristics. A few weeks after Dr. Taylor's funeral, I happened to be in Philadelphia and visited his grave. I instantly recognized that grave because of the lustrous beautiful compact grass covering the plot; there was no turf in that cemetery that compared at all to it. It had been selected and planted and treated according to his principles.

The modern construction of greens and the best results in the growing of grasses on fairways developed largely from his experiments, all because of basic elemental research into every detail of composition and processes.

Dr. Person ably presented before this group in his paper "History and Principles of Management" so much of the scientific approach made by Dr. Taylor to all of his work that a further discussion on my part would be pure repetition. The particular point which I wish to make and amplify is that management mechanisms, unless designed and applied only after complete elemental study of particular characteristics, will operate *to the detriment* of the enterprise.

Features of Mechanisms: A letter is a simple unstandardized form. If the information is the same in text and location and frequent releases are to be made, it is usually more economical to have such information printed on an outline sheet. Thus a form grows to a condition where practically all is printed in except the date line and a few dotted lines for variable information. Insurance contracts are a good example of this latter form. When operating conditions indicate a specific type of form and another is used, the result will be less effective; if the inappropriate form persists in use it may retard or completely defeat the desired accomplishment.

Science in management, as in medicine, is established through elemental research; complexities are reduced to least elements and these carefully observed, their limitations exactly determined and re-combinations made for more specific purposes.

Management mechanisms commonly used in industry are those suitable for the determination of basic information respecting:

Quality of materials; determined in chemical and physical laboratories.

The setting of specifications for manipulation of these materials to include the appropriate type of machine and tool to use and the rate at which the machine and tool are to operate.

The specifications for appropriate operations personnel.

As the micrometer is used to determine precise dimensions, the chemical flask with testing agents the composition of material, the selescopescope and Brinnell testing machine, material hardness, and the torsion and flexure testing machines, material structure, so is the stop-watch or time micrometer used to determine the best rate at which cutting tools should be operated, and the appropriate machine on which to do the work. The time required for operation on small elements as determined with the use of the stop-watch when added together become the total time required to finish one unit of work. The total capacity of equipment, the extent and sizes of buildings and the capital investment in operations become known. Unfortunately due to a lack of intimate knowledge of factory operations the stop-watch has been conceived as being used only for the purpose of speeding up a worker or to cut the cost of product. On the contrary, it is a necessary device for operations planning whenever time is a factor. Too frequently an inappropriate speed causes spoiled work, disrupts sustained coordination of organizational personnel and the flow of product through the enterprise.

Time study and rate setting are two distinctly different processes. There is no assurance that the exact facts determined through time study will be appropriately applied in the setting of wage rates. A precise study of elemental time with a stop-watch requires the same skill and thoroughness that is required in the use of other exact measuring devices. It is unfortunate that to get something for nothing the management in many enterprises has permitted rates to be set without exact pre-determination of all factors influencing the work to be done.

Even when the stop-watch is used, in the larger number of instances the management has not been willing nor has it given the attention necessary to see that all factors that can affect the worker at his job are under such constant control as to permit constant uniform performance.

Premium or bonus wage compensation is usually based on previously-known average performance, thus ignoring later changing operating conditions. Time is set somewhat higher than this average. If the operator completes the work in less than this time, he receives an added pay allowance of one-half of the time saved multiplied by his hourly rate. If the conditions in effect when the average time was determined change, either improving or impairing his opportunity for performance, he will gain or lose accordingly. Had the original conditions influencing each element of the work been thoroughly investigated and recorded, new observations from time to time would make known these changes and permit the rates to be adjusted accordingly. This would also provide that improvements by the worker would be to the advantage of the worker and the improvements by the management benefit the enterprise by permitting reduced sale costs and plant modernization.

It is generally thought that gains in speed of output—I believe 90% of the workers think this—are solely due to the workers' enterprise when in truth this is not at all true. A constant battle continues between workers and management over the division between them of the profit returns from that output.

This is a subject worthy of controversy.

The coordination of activities of management and operating personnel and facilities connected with an enterprise such that their individual actions will be effectively interlocked is one of the most important, but least solved, mechanisms for the management program. If the finished product is in single pieces and distributed from finished stores, the problem of coordination is a simple one compared to that required for a complex product illustrated by the type-setting machine, automobile, locomotive, etc., in which no production can be sold until every unit and every operation on each unit has been completed, assembled and the whole tested. If you must put on a sit-down strike in an automobile plant, you have only to sit down on one assembly line, or on one part and the whole thing is stopped because you can't get any product out of the plant.

As an example of a relatively simple problem of coordination, I present an exhibit of mechanisms utilized in the program of the REA. Before discussing this plan, I wish to state that standards are never absolute. The meter now accepted as a standard unit of length measurement was contemplated as the ten-millionth part of a quadrant of a terrestrial meridian. However, though failing in such exactness a bar of metal in France under certain standard conditions has been accepted by International agreement as a standard meter.

I have developed the condition that standards are usually established by agreement between interested parties who, until new agreements are made, contemplate the use of these standards. In many fleeting enterprises and in others contemplating permanency, the or-

ganization personnel in accord with such agreements set up physical and performance standards, even though changes are rapid and frequent re-agreements must be made. At least through such approximate standards there is a common understanding of what, how, where and when things are to be done; the individual can carry out individual action which nevertheless will prove to be completely coordinated with that of his fellows.

The development of the program of the REA occurred in a new and untried field: routing, scheduling and dispatching of the work through the coordinated REA personnel, the borrowers and their facilities were then impracticable; there were no bases for standardization. With increased performance and acquired experience, the plan which I am presenting was developed by the REA for these purposes.

I suggest if discussion is now desired, it is well to have it at this time.

Mr. Keplinger: Does anyone have a question as to the material so far presented with regard to its application in government work, or otherwise? Any comments?

Mr. Nels Anderson: I have a question on what you said about establishing wage rates. I don't think you finished your thought there and it left me with the feeling that you were conveying the idea that wage rates in industry are not necessarily set by these stop-watch studies or in any way based upon them, but upon considerations.

Col. Babcock: A small part, Mr. Anderson, of rates are set by stop-watch study; generally by the findings and keeping of records of finishing performance on a large number of units of product over a considerable period of time; then by selecting the unit time when most rapidly performed during a short period; this unit time is the basis for the rate. Study with a watch was never carefully made: in fact, probably not made at all. A foreman may walk around with a watch in his pocket, snap the time of a few pieces, then later look at his watch to see what happened. This does not occur in plants where scientific management is desired or practiced and where equity is of deep concern; it often is not. A reason for speeding up workers is, of course, to prevent the need for adding a considerable amount of extra equipment for brief periods of time to be used during breakdowns in regular equipment, or when parts slow on a previous operation must be forced through to maintain work on the assembly lines.

I shall now present a brief outline of the REA program and what has been done. An appropriation under an Act of Congress is made for a given amount of funds, now approximately \$40,000,000 a year, for the building of rural lines to serve customers not now served by power from a central power station.

The REA then loans these funds to corporate bodies; no grants are made. The security taken is usually a mortgage and lien on the lines which are constructed. The amortization period at present is for twenty years at an annual interest rate of 2.77%.

When this program was introduced, it was believed that Electrical Utilities would be the chief borrowers and would construct the rural lines. It was found, however, that this did not work out to the best

interests of the users. The Utilities wanted to limit, decidedly limit, the location of lines to high consumers at high unit rates to cut down area of service as contemplated by the Act—the broadest possible service to the greatest number of rural people.

The REA solved this problem through loans to incorporated Electrical Cooperatives. The REA is now up to date with its loans as provided in the Act with probably 90 per cent of all the cooperatives that the REA assisted in organizing. There are approximately \$65,000,000 now on loan contracts with newly organized cooperatives.

The cost of line construction has been reduced from a prevailing \$1,200 to \$1,500 a mile by the utilities to approximately \$950 a mile for equivalent service. They are fine lines: they are so good, in fact, that it is observed utilities are now utilizing the REA designs and construction practice.

That is our background. The problem is to determine where a rural group wants service, then to assist them in determining the area to be served, and to organize such information into engineering plans. If, after an economic study has been completed, it is found that that line will be a feasible one and probably pay out, an allotment reserve is made for that project in an amount of funds to cover construction of the given number of miles, to serve a given number of customers. A 300-mile line costing with all overhead \$290,000, serving 1200 or more customers, is an appropriate example. There is little data for standards.

A Cooperative must be organized; a loan contract for construction made between parties. This necessitates the selection of a lawyer. The REA approves that selection. To determine the final design of the lines, an engineer is needed; the REA gives approval action on that selection.

The lawyer begins organizing the Cooperative, prepares the loan contracts, and records the executed mortgage.

Eventually the borrower has designs, opens bids, selects and approves a contractor, and construction begins. Those plans and contracts are examined carefully and the REA approval secured. The contractor starts work in the field, clears the right-of-way, secures poles and erects them, strings wire, sets up transformers—and finally the customers are connected. REA has a constant responsibility to see that this is all accomplished rapidly, accurately, dependably, and economically, and that satisfaction is given by the service. So we have a problem in coordination.

Although not in great detail, I shall list some important operations considered necessary for control.

Starting with an allotment of funds, the operations in sequence are:

Allotment of funds

Selection of lawyer, engineer, and superintendent

Incorporation of borrower

Loan contract sent to borrower

Loan contract executed and approved

Funds advanced

Plans and specifications prepared
Construction bids released
Bids taken and contract let
Construction of line as to cost, quality and time concluding with final inspection and approval
Amortization and interest payments on loan.

The fuse which sets all of the plans into operation is an official order from the Administrator showing the amount of funds that are to be expended for rural electrification in location, amount, and time.

Determinations have been made for each of the above items of procedure and for a large number not here shown of standard average times required to perform. These related items are graphically co-ordinated such that the number of days after allotment of funds to the completion of a construction contract is standardized—all related to the construction contract.

With the present REA work capacity and procedures an allotment must be authorized approximately 13 weeks before the construction contract can be approved. The selection of a lawyer, incorporation of the borrower, and final execution of a loan contract for construction funds follow an allotment. A contract with an engineer for the development of plans and specifications can be made only with a loan contract executed. A construction contract can be approved only after the engineer's plans and specifications have been submitted for bids, the bids advertised, then opened, and one of the bidding contractors selected and approved. Thus it will be noted there are certain procedures that must occur in sequence. There are many other procedures that may be carried on coincidentally with the major controlling ones.

When approved, the contractor will procure necessary materials and workmen and begin construction of the lines. In addition to the main power transmission lines which form the backbone for area electrification, there are ribs distributing power from the main lines throughout that area and other short lines connecting the customers to these ribs. There are also sub-stations to build; these are banks of electrical transformers which receive electrical energy at the power plant pressure and transform to that pressure required to send the energy over the transmitting lines to the customer, at an appropriate pressure maintained at all times at the users' appliances.

The principal sub-divisions of construction important for management control are: clearing of rights-of-way, digging holes and erecting assembled poles, stringing and tying in conductor wire, erecting transformers, connecting transformers to consumers' properties, setting sub-stations and where power is not otherwise available, the building of suitable power generating plants.

As in the case of document progress leading up to construction contracts, so in construction, standard times for performance of essential operations and progress of work, as evidenced by the above construction units, are determined.

Through appropriate management mechanisms including bulletin boards, perpetual records and graphs, the administrator's schedules and the resulting performances attained for each item are related.

As a train moves along its track, the locomotive will have passed a fixed point long before the caboose, but each will pass that point at the same rate of speed. If unit processes related to one another in order of preference and time are assembled in a rigid diagram and that moved at a uniform rate past a point, the rate of performance for each process therein will obviously be the same.

Correspondingly, if allotment of funds is considered as the locomotive and the construction contract as the caboose, and each separate process a car in the train, then depending only on the space between them each will attain a common value in the same period of time, but at calendar dates: i.e., after the allotment is made for a given amount of funds, construction contracts should be approved in the same amount 13 weeks later. It is admitted that each of the processes of this REA structure is elastic—not rigid—and therefore will give and take throughout the length of such a train; but if too much stretching occurs in or between units, a corresponding tension rises such that even if the construction contracts do “drag,” they are at sufficiently frequent intervals snapped back into the average period.

This diagram may pass a given point, or remain fixed in place and the point move past the diagram. If additional points successively move past, *each* representing increasing amount of a total to be accomplished, in time the total will have been applied to each process and the program thus scheduled to its completion.

The determination of the schedule vs. performance is made in the administrative office through a mechanism termed a “Control Board” which I shall soon show you with explanations. The weekly findings at this Control Board are distributed to the organization through appropriate records and graphs such that all persons in the organization with authority to modify performance receive identical coordinating information.

(There was displayed for the gathering the mentioned mechanisms.)

Mechanisms of any nature are serviceable, but to inform the organization personnel concerning situations respecting momentary conditions and the progress of the affairs with which they are administratively charged. Therefore, without capable administration and intelligent and active individuals in an organization, management mechanisms, records, etc. are worse than red tape. They add greatly to cost without compensation. If the information that is supplied is pertinent, it behooves the responsible persons to understand thoroughly the features presented therein and to incorporate them in their daily thinking and action.

DISCUSSION

If anyone still feels that the exposition of management principles by Dr. Person is a bit over the heads of government executives, Colonel Babcock has brought the subject home to us by discussion of ways and means of making management a live thing to us.

Principles march toward application only by the aid of mechanisms. But mechanisms are not automatic or self-regulating things. They may be well designed and extremely productive, or designed without benefit of experience and skill, in which event they produce chiefly headaches for all concerned.

Trained management judgment becomes indispensable instantly when devices are under consideration for application of management principles. How may judgment be obtained? The answer is not any too clear yet, but one thing is sure: Without a thorough and conscious training in management as a major and distinctive field of knowledge, judgment in conceiving and applying management mechanisms is almost sure to go wrong.

Most of the work of the executive departments and agencies of the federal government may be crudely classified as "field" work or "office" work. It is in the "office" classification, I think, where we fail most seriously to provide essential management engineering, or to develop and use the right sort of management mechanisms.

Even in our big "field" bureaus, we find a terrific load of office work. And, regretfully, we find it all too often, unstudied, badly organized, with routing and scheduling unnecessarily complicated, standards lacking or inadequate, and dispatch so crippled as to invite the common charge that we are wrapped in red tape.

One glaring fault is unwillingness or lack of the executive capacity to define and delegate responsibility and the concomitant authority. Another is a looseness of control which permits procedures to be initiated, developed and carried forward interminably at the whim of an individual who generates a "bright" idea. Continuous searching analysis of office organization and procedure, and a procedural control, or mechanism control, in the hands of an expert or procedural board with authority in his or its field over the whims and vagaries of functional units would pay huge profits in almost any governmental bureau one might select.

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Possibly this conflict between "field" and "office" is the result of the faulty type of organizing mentioned by Colonel Babcock and by faulty manipulation of management mechanisms. Neither field work nor office work is the "objective," as stated in Mr. Tead's definition, toward which we work; so why worry about its "terrific" load? Both must contribute to that objective, otherwise why do either? Colonel Babcock points the way out. Start with an objective, not with an "Engineering Department," a "Legal Department," etc., nor with "field work" and "office work." Next determine what work is necessary to reach this objective; if some can best be done in the office, do it there. Why worry about it? If any proposed work does not contribute to the objective, do not do it. Then, as Dr. Person proposed, find the "best" ways. Make these standard; then plan. After that, pay attention to the "mechanisms" and prevent cross-purposes and loss of time.

Is it not a bit "amateurish" to talk about "cutting down on office work" or "cutting down on red tape?" Is it not easier in the end to do the job "scientifically" through a determination of "purpose" and "best ways," rather than the haphazard way of cutting down and building up? Colonel Babcock tells us such methods always get poor results—not what you want. The systematic way is the easy way except for one thing—human nature. We none of us like to change our work habits.

But in spite of this, the "easy" scientific management method is coming to be more and more used, and will continue to be more and more used in all kinds of government activities.

LECTURE V

THE PHILOSOPHY OF MANAGEMENT

By ERNEST G. DRAPER,

Assistant Secretary of Commerce

IT seems to me that it is a particularly happy occasion when representatives of the Department of Agriculture and the Department of Commerce get together for a frank discussion of mutual problems.

If I read my history aright, it was not so many years ago when relations of this character were notable by their absence. The last five years have witnessed a profound change. Under the leadership of the President, the Secretary of Agriculture and the Secretary of Commerce, a campaign of education has impressed upon the whole country the necessary interdependence of agriculture and commerce. We need each other and a proper balance between the interests of both of us if we are to prosper as a nation. We need each other not only for economic reasons but once in a while for educational purposes also.

And so we are here this afternoon to discuss, in an informal way, the philosophy of management. Perhaps I can make the discussion clearer if I ask a number of questions and make an attempt to answer them.

What different phases of management are usually grouped together under a broad interpretation of the term?

Business executives seldom give thought to the exact meaning of general terms relating to their activities. Among the terms used freely and without accurate definition are administration, organization, and management.

We hear these three terms used synonymously and at times each one of them appears as an over-all expression used to cover the entire field. Consequently, I believe it would be helpful to preface our discussion this afternoon with a brief consideration of the exact meaning of each of them.

Oliver Sheldon in his well-known classic, the "Philosophy of Management," defines administration as the determination of the corporate policy; the coordination of finance, production and distribution; the settlement of the field of the organization and the element of control of the executive. Strictly speaking, management proper is concerned with the execution of policy within the limits established by administration.

Organization is the process of combining work that individuals or groups have to perform with the facilities necessary for its execution. If we accept these definitions, it is evident that administration is responsible for the establishment of an effective arrangement of personnel and equipment. It is responsible for defining the objectives of the organization and the formulation of general policies governing

the efforts made to achieve these objectives. Management then is primarily concerned with the supervision of the organization's activities.

The term management is used so frequently to cover the formulation of major policies, the designing of the organization and the supervision of all activity, that I believe we can appropriately base our discussion upon this broad interpretation.

To what extent do we apply management in our social, economic, and political life?

It would be difficult to conceive of any group activity or even individual endeavor in which management or at least some phases of it is not applied. A single family, a church, a one-man shoe repair shop, a giant corporation, a small-town board of selectmen, or the federal government with all its branches and agencies; everyone of these must employ some form of management. We should never think of comparing our home life with a business enterprise in this respect (except possibly when devising means of reducing our income tax), and yet there are certain similarities. Family policies and objectives are formulated and a more or less definite pattern of duties and responsibilities involving each member of the household is usually established. Although the process is not as formal and deliberate as it is in a corporation, nevertheless it exists. In general, I believe we can safely say that wherever groups are united for a common purpose or objective, some form of management is bound to exist. As the size of the group increases, the importance of management becomes more evident with the result that greater attention is usually given to such problems as defining policies, organization, and supervision of personnel.

What are the essential elements of management?

Like medicine and law, management is essentially both a science and an art. As far as medicine is concerned, we might carry the analogy one step further by observing that in both fields, the art was developed long before the science. Management as an art had existed long before the work of Frederick W. Taylor in the 1880's. Not until his writings started to appear, however, do we find much evidence of published experience that can be regarded as the background of a science. Even though this subject has been given a great deal of scientific study since Taylor first began his work, it is likely that the science of management is still in its early teens. The specialist of today is well versed in such fields as principles of organization, production planning and control, time and motion study, budgeting and market research. No one would seriously contend, however, that we have yet reached the stage where these techniques can be regarded as fully developed scientific instruments.

A thorough knowledge and appreciation of the importance of all management techniques is essential in the modern well-managed corporation. Of far greater importance is the skill and experience that is necessary in their application. No matter how familiar we are with the scientific elements involved, we must also become masters in the art of applying this knowledge if we are to become successful executives. The medical student does not become a successful physi-

cian until years of practice have given him a high degree of skill in diagnosis and medical treatment. Similarly, the student of management by experience must become adept at applying scientific principles in order to gain an understanding of the art of his profession.

Exactly what do we mean when we speak of the art of management?

Here, we are dealing with relative intangibles as compared with the scientific aspects of the problem. The art of management implies a knowledge of methods and procedures, but in applying this knowledge, it involves the exercise of a large variety of faculties. The executive must acquire skill in recognizing and analyzing the facts that have a bearing upon his problem. Initiative is required in devising effective courses of action. A critical and well-balanced judgment is necessary in selecting personnel. It is vital in choosing among alternate plans of procedure. The ability to foresee both immediate and long-term results and reactions is another requisite. Most important of all, however, is the whole range of attributes that must be developed in order to deal successfully with human relationships. In this group we would include such elements as leadership, knowledge of human behavior, diplomacy, courage, patience, persistence and sympathetic understanding.

Why is it necessary to place major emphasis upon human relationship?

No employee stops at the entrance of the factory or office before starting to work in the morning to check all his habits, prejudices, and loyalties. He is still just as much an individual in the factory as outside the factory. He is the most complex and changeable of the elements that management must deal with. The same is true of relationships with those outside the organization. The customer, the banker, and the general public must all be treated as highly dynamic, distinctive individuals.

Management is primarily concerned with directing and regulating the activities of a group of individuals. The attitude, typified in the reference to employees as a collection of mill hands, is a concept that belongs to the horse-and-buggy age. Today, more than ever before, the subjects of industrial relations and public relations are recognized as among the most important problems confronting the executive. Industry has made rapid strides in developing production technique and mechanical equipment. Now it must direct its efforts toward making similar progress in the field of human relationships.

In the larger organizations the problem of maintaining healthy internal relationships is especially important. Here the close personal relationship between major executive and individual employee, which usually exists in the smaller company, is no longer possible. There is a tendency for the whole atmosphere to become more official and less personal. Feeling that he has become a mere cog in an automatic machine, the employee loses interest in his work and forgets that there is any such thing as loyalty to his company.

Please do not misunderstand me on this point. I am not attacking big business. Many of the largest corporations have successfully avoided this danger. The American Rolling Mill Company, the Endi-

cott Johnson Company, the U. S. Rubber Company, the Standard Oil Company of New Jersey, the General Electric Company, and the General Foods Corporation, are among this group. These companies have exercised extreme care during their growth to avoid becoming static in their relationships with employees. Their motive is undoubtedly both altruistic and businesslike because they have learned by experience that in the end this policy makes happier employees and brings larger profits. They know that the adverse effect on the individual and his work, which is caused by the feeling that management has become a deadened bureaucratic machine, will ultimately be reflected in the balance sheet.

It is evident, therefore, that the large organization can maintain healthy relationships, but the fact remains that the larger a unit becomes, the greater is the danger that morale will be lost. The further we detach ourselves from direct contact with our employees, the more necessary it becomes to guard against the evils of bureaucracy. And this holds for government as well as for business.

Accompanying the development toward better human relationships, we have witnessed recently a more searching attitude on the part of executives toward the question, "To whom is management responsible?" The obvious reply, "To the security holders," is no doubt a correct one, as far as it goes. In a capitalistic system, there must be some inducement to attract investors. As a matter of practical reality, the primary responsibility is, therefore, that of making a profit.

However, present day society is not entirely satisfied with this answer. There are others who must be considered in addition to those who supply the capital. It is becoming more and more necessary to provide workers with means of self-expression and development; safe and healthful working conditions; partial support during periods of unemployment and during old age; and above all, a wage that will enable the employee to maintain an adequate standard of living for himself and his family.

Industry appreciates the fact that it no longer can avoid assuming a certain degree of responsibility for some of our unhealthy social conditions. An excellent statement of management's responsibility in this connection is contained in a recent address made by Mr. E. R. Stettinius, Jr., Chairman, Finance Committee of the United States Steel Corporation. In referring to management's responsibility, Mr. Stettinius said that enlightened business was thoroughly in accord with the new concept that "our instruments of production, land, transportation, factory and office, shall in the future be conducted with more statesmanlike emphasis on the welfare of all involved, employees, stockholders, consumers and public.

"It is no exaggeration to say that one of the most important functions of business administration, on the large scale, is the social function. Having helped to create the modern society, the business man will not be excused from the duty of coping with its problems.

"More and more American industrialists have been awakening to this responsibility. A factory or office is more than a workshop. We can achieve the utmost in economies by engineering knowledge; we

can conquer new fields by research; we can build plants and machines that shall stand among the wonders of the world; but unless we make it possible for our workers and executives alike to enjoy a sense of satisfaction in their jobs we shall have failed in one of our great responsibilities."

How has this enlargement of management's responsibility affected the status of the executive?

The growth of the large scale business enterprise has been accompanied by a complete separation of the identity of capital and management. Increasing the size of the unit intensifies the complexity of management problems. Mistakes and poor administration become more costly. The result is that mere possession of funds or ownership of large blocks of securities is no longer accepted as evidence of satisfactory administrative ability. Training, experience, and a full appreciation of the responsibilities involved are essential. Often, the individuals who possess these qualifications have little or no share in the actual ownership of the company that employs them. They are, therefore, appointed to administrative positions solely because of their all-around ability.

The natural development under these circumstances has been in the direction of a management profession. Many of our business executives now regard their occupation as a professional one and I believe there is a great deal of justification for this attitude. Although the science of management is still in its infancy, sufficient progress has been made to require professional training and skill of those who occupy responsible executive positions. The old-time, two-fisted fighter who reaped large profits by resorting to trickery and cunning has gone with the wind. In his place has appeared an entirely new type of individual who is more responsive to the aspirations of his workers and to the demands of society.

Another indication of the growing professional character of management is the progress now being made in establishing codes of ethics in many industries. Standards of individual conduct are universally accepted in such professions as law and medicine. Similar standards calling for voluntary self-restraint and proper consideration for the interests of others are now becoming prevalent in business. It should be noted here that the trend in this direction appeared a number of years before the enactment of the National Industrial Recovery Administration and that progress has also continued steadily since the invalidation of that act. It is true that the vicious chiseler can still be found in the industries that have voluntarily adopted codes. I doubt, however, that any large group has ever been completely successful in eliminating this element from its ranks, except by effective legislation.

The discussion so far has dealt primarily with business management. No doubt, you are beginning to wonder how all this can be applied to the activities of a government agency. In other words, "How can the philosophy of business management be applied to public administration?" It is easy to find points of similarity between business and government. Sweeping generalizations, however, are dangerous, because some of the differences are fundamental. The

functional breakdown of government activities into the legislative, judicial, and executive divisions does not correspond to the organization pattern found in industry. The laws governing the policies, choice of methods and decisions of those who occupy responsible positions in the executive branch of government are far more restrictive than any provisions contained in the charter of a private corporation.

In spite of these basic dissimilarities, the two fields do have many common problems. The individual employee of the government is no different than his next-door neighbor who is employed in private industry. His response is the same to the treatment he receives. His loyalty can be inspired by the same type of leadership as that required in business. It is evident, therefore, that the task of management is essentially the same in both fields. We are primarily concerned with the coordination, direction, and regulation of groups of individuals. And let us never forget that here again it is necessary to place major emphasis upon the human relationship phases of our work.

In what respects is it necessary to modify the philosophy of management in order to apply it to public administration?

To answer this question, let us first examine our objectives and responsibilities. The true statesman has long recognized the responsibility of those in public life to consider first of all the interests of the country as a whole. Like his colleague in business, the executive in a government office will be judged ultimately by the extent to which he endeavors to promote the general welfare of the entire community. This responsibility is perhaps more generally recognized in government than it is in business. It implies a broad evaluation and consideration of the interests of all branches of our society. The healthy existence and development of each geographic section, the well-being of the farmer, the business man, and the laborer in their dual capacities of both producer and consumer must be carefully preserved.

In some sections of the world democracy has been discarded. It has been attacked on the grounds of impracticability and failure to protect adequately the interest of those whom it governs. The standard of political freedom has long been carried by this notion. Our history has witnessed a number of periods when democratic government has been subject to severe stress and strain. But today our faith in democracy remains more staunch than ever before. Those who occupy administrative positions in our government must assume a large share in the responsibility for preserving this faith. We believe the political structure of our state to be superior to any other form and yet our government can be no better than the individuals who administer it.

This applies equally to the personnel of every type of every administrative agency, whether it be devoted to protection, regulation, taxation, diplomacy, or service. The effective administration of all these phases of government requires efficient organization and the highest type of personnel obtainable. It requires thorough training in the building up of a career and merit service which will attract men and women of outstanding ability. Finally, it requires a constant effort on the part of officials to adjust the functions of govern-

ment to meet the ever-changing needs of a society in which new problems are constantly arising. This is our responsibility if we are to discharge fully our obligation to assist in preserving democracy.

DISCUSSION

"A thorough knowledge and appreciation of all management techniques is essential. Of far greater importance is the skill and experience which is necessary in their application. No matter how familiar we are with the scientific elements involved, *we must also become masters in the art of applying this knowledge* if we are to become successful executives."

These statements by Assistant Secretary Draper are perhaps the most significant of his thoroughly interesting and instructive lecture. Among government executives they deserve special emphasis.

Except for facilitating personnel, the professional schools have long been a principal source of recruits to many of our federal bureaus. Scan these organizations and it becomes quickly apparent that the key executive positions are filled largely by professional men, scientists in all the varied fields of science, many of them ranking high in their profession and given wide official and public recognition. This is as it should be. It is somewhat surprising, however, to find also that among scientists there is often a distinct antipathy toward scientific management and all its works. Among the old-time "practical" men one finds like attitudes. Scientific management is all too often envisioned as a sort of demon seeking to rob the worker of his soul and equip him instead with a stop-watch. Officials endeavoring to introduce the principles and techniques discussed in this series of lectures sometimes encounter fear of destroying incentive, initiative, resourcefulness, cooperativeness, *esprit de corps* and such other values. The "efficiency expert" has been and still is quite unpopular among us.

The existence of these conditions simply lends emphasis to Assistant Secretary Draper's expression of the need for *knowledge* of scientific management and *mastery of the art* of its application. We who seek administrative management of a higher order throughout the federal service have to blame only our own failures in these two respects for our failures to make the progress we desire.

During recent years we see, even in the "scientific" bureaus, a trend toward greater use of schools of administration as a recruiting source on a par with the schools of natural and physical science. This is encouraging. Until the full fruit of such recruiting can be realized, however, it is up to those of us already laboring in the field to increase our knowledge of the science of management by whatever means may be available, and to improve vastly our salesmanship on the art of its application.

It would be of material aid in this direction if the young professional men who come to us fresh from the schools each year could bring with them, in addition to their broad knowledge of their particular technical fields, at least the groundwork of knowledge of principles and techniques of management. Certainly in moving from the classroom to the public service workshop they must in most cases join a *group* working toward a *common objective*. As Mr. Draper points out, in any such group some knowledge and application of scientific management are essential to complete success.

* * * * *

All through Assistant Secretary Draper's talk runs a thread of emphasis on human relations as a branch of management. It is easy to infer that he believes "coordination, direction, and regulation of groups of individuals" to be the most important aspect of management. Among men with relatively large responsibility for supervision of others, probably few or none would disagree with such an attitude.

And yet, how easy it is to find working groups, even small ones, held back by the erosion of jealousies, conflicts, frustrations or corrosion from the feeling, whether right or wrong, that *the road to advancement is that of applause for the boss*.

Perfect leadership is no easier to attain than perfection in other difficult arts; but once a vision is grasped of what really fine human relationships can do for

an organization, leaders must strive predominantly for increasing perfection in the art of building good personal relations into the organization.

* * * * *

From still another angle the Assistant Secretary's talk is significant. Mr. Draper now represents top-management in government. He has represented top-management in industry. He tells us that, while organized differently, the two are essentially the same. To the ordinary employee, such as you and I, the principles, the philosophy, and the art are the same. In both, management deals with humans in groups; in both, human relations are of first importance.

And too, we are told, management has a social responsibility. And also he puts it the other way round—management is a part of the responsibility of society. At least that is true in a democracy. For government in a democracy has been defined as "the people organized to do things for themselves." How many people look at their government from that viewpoint?

While this definition expresses the general over-all objective of government, the same general objective is creeping into business. For industry could be defined as "doing things in an organized manner for the people and with their consent." The social responsibility of industry, as Mr. Draper says, is being more and more recognized. Profit alone can no longer be accepted as the governing motive. Why? Because management executives are now professional men with professional standards and their own code of ethics. And as a result, government and business are coming closer together, not drifting apart. At least that is the way it looks from the management point of view.

LECTURE VI

RELATION OF ORGANIZATION TO MANAGEMENT

By EDGAR W. SMITH

I AM very glad Dr. Woods asked me to talk about my own organization in dealing with the matter of the relation of organization to management, because it is the only one I really know anything about.

The General Motors Export Division, a division of the General Motors Corporation, is organized under a plan of management and functional specialization involving the application of the age-old principle of line and staff operation to all of the phases of its work. Adoption of this line and staff principle, which is the very keynote of our organization philosophy, became inevitable with recognition of the potential size, diversity and extent of the Export Division's business. It is peculiarly suited to the needs of such a business, and it is indispensable, we have found, to its satisfactory discharge.

A proper application of the line and staff principle in our operational procedure and organization structure requires, naturally, a complete understanding of that principle and a will to abide by it. Adequate comprehension, freedom of practice, and the will to adhere to the established principle, are all equal requisites. The purpose of this paper is chiefly to clarify, to the extent possible, an understanding of the principle itself. The job of getting it across is one we have to do ourselves back in New York and out in the field abroad.

The terms "line" and "staff" have very obviously been borrowed from military parlance. A line officer performs actual operations in the theatre of war, most frequently, but also in the seclusion of a distant building at headquarters; and the operations he performs include both thinking and doing. The captain in an infantry regiment in France during the War was patently a line officer. So also was his regimental commander and his army commander and the Commander-in-Chief of the A.E.F., but—and this is a point not widely recognized—so also in fact was General Peyton C. March, Chief of Staff of the United States Army, who sat at headquarters back here in Washington. All these officers thought and acted. They acted in the sense that they did things and exercised direct authority;—but it in no wise affected their status as line officers that they should also have been obliged to think.

Probably the chief element of confusion in an understanding of line and staff organization is that planning, as expressive of forward thinking, is somehow considered to be exclusively a staff function. A staff officer, as a matter of fact, does assist his line superior in the latter's thinking and planning. In the army the staff officer is attached to the Chief of Staff to aid in the development of strategy and the provision of materials, both of which enable the line officers, including factually the Chief of Staff himself, to carry on. The use of a staff is not, of course, confined to any single officer. An army

commander has a staff; a corps commander has a staff; a division commander likewise has a staff, and in the smaller units, down even to the company, there are staff functions to be performed.

In our own organization in General Motors, the General Manager's staff exists in the persons of Department Managers. These Department Managers themselves have certain assistants who act on frequent occasion in a staff capacity. The Regional Directors have their staffs, and in the case of the Managing Directors, the men immediately responsible for line operations in each individual ultimate territory function in a staff capacity whenever they act with him as advisers and consultants.

It will be noted in this connection that no man in the organization, with the exception of the President, is either pure line or pure staff in the day to day conduct of his work. Staff officers execute very definite line functions in the administration of their own departments, and so typical a line officer as the General Manager discharges a staff responsibility in his consulting and advisory contacts with the President. The President himself has purely line duties.

Possibly the simplest way of understanding the difference between the line and staff attributes is to state that if the administrative head of an organization had sufficient time and sufficient ability to study out in detail and be thoroughly familiar with all phases of the work for which he is responsible, he would not need a staff. Therefore, a staff organization can be looked upon as a group of men who, at the direction of the administrative head, study and analyze problems and develop principles to the end that the administrative head may have before him the necessary facts and opinions upon which to pass judgment and to take action. A staff is something to lean upon. That is its original meaning, from which we have arrived at the derivative sense of the term as we employ it today.

Before we attempt to apply the line and staff conception of operation in detail to our own organization, it is desirable that we look first to what we may call the operating obligations of our own division as typical of the operating obligations of any industrial company. These operating obligations are inherent in all management, existing with us originally in the President. They are delegated by him for actual pursuit and accomplishment to the General Manager. In an organization of the scope and complexity of the Export Division, it is necessary for the General Manager in turn to delegate responsibility and authority in generous measure to his own subordinates in order to assure the attainment of his ends. It is important in this connection to note that the operating obligations of the Export Division have no inherent identity with the line and staff principle of operation itself. The line and staff principle of operation is simply the inevitable means that the General Manager takes, in his obvious inability to do so personally, to secure the satisfactory discharge of his operating obligations. The operating obligations of management, as we have defined them, are classified very naturally under three distinct heads: first, planning; second, administration or execution and, third, results control.

The line and staff principle of operation permits and, in effect,

obliges the General Manager to delegate a large measure of the responsibility and authority for administration to his line officers in the field. It permits him also to delegate a large measure of the responsibility for planning and results control to the staff officers by his side in New York.

The authority and responsibility projected out to the line officers in the field is for all functions of operation in a restricted, defined territory. The responsibility delegated to the staff officers in New York is for a single function of operation in all territories.

For the purposes of logical development, let us discuss first the obligation of administration. The day to day business of the Export Division, as of any organization, must go on. Cars must be sold and serviced; men must be hired and trained; material must be flowed to the plants and along the assembly lines and out to the field; the thousand and one things that happen daily and hourly must be done. No one man can do them all; no one man can even supervise directly their doing. Limitations of time, distance and human capacity determine these elemental facts. Twenty-eight individual operating units, such as those comprising the Export Division throughout the world, even if they were located within the boundaries of a single state, would be unwieldy of direct administration by a single man. The confusion incident to maintaining contact with so great a number of points of operation would obviously be too considerable, and the problems involved too complex, to permit satisfactory handling in this manner. It would be natural in the circumstances to combine the individual units into wieldy, less numerous sub-groups, and to put at the head of each sub-group a man to whom the General Manager assigned the responsibility and delegated the authority necessary for its direction and competent administration.

The operating units of the Export Division are not located in a single state; they are scattered over the whole face of the globe. This fact of their remoteness, from New York and from each other, lends additional emphasis to the necessities recited. It is for these reasons, then, and because it is desired to simplify the organization structure rather than to complicate it, that the office of Regional Director has been created.

We are, therefore, brought to the first step in the definition of the organization chart: The President has delegated his original line authority and responsibility to the General Manager; the General Manager, in turn, now proceeds to delegate to his Regional Directors—and of these we have six throughout the export world—his own line authority and responsibility for a large measure of his operating obligation having to do with administration; and the Regional Director accepts this authority and responsibility for his particular territory in all of its functional elements of management, sales, finance, manufacturing, supply and the others that may be defined. (*Chart I, p. 56.*)

Now, let us turn to the other operating obligations of planning and results control. By the same reasoning that goes to establish the impossibility of direct administration of all territories in the world from a single source, it is obvious that the planning, coordi-

nation and checking of results under their various primary specialized aspects of sales, finance, manufacturing and supply, is equally a practicable impossibility. The General Manager finds it expedient and necessary in these circumstances to allocate the responsibility for doing the greater part of this work to a number of men, each of

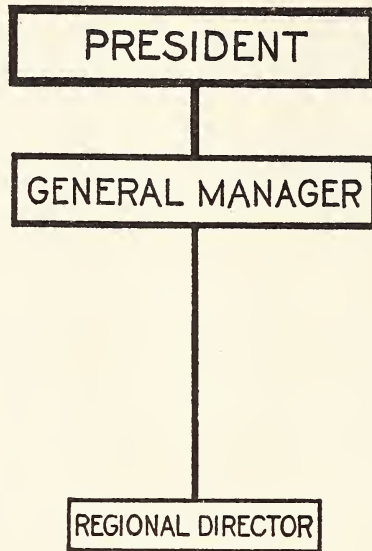


CHART I.

whom is charged with assisting and advising him in the particular field for which he has been chosen. The functions of sales, finance, manufacturing and supply are simply the logical and convenient avenues of specialization which have arbitrarily been determined upon. The word "function" itself has no particular organization significance beyond its meaning of specialized activity. Management itself is a function. Publicity, service, and inventory control are functions subordinated to certain other functions for ease of classification and government. Thus, in discharging his operating obligation of planning, so far as it applies to the elements of business that have to do with sales activity, the General Manager looks largely to the General Sales Manager for staff aid and counsel. He looks similarly to the General Manufacturing Manager for planning as it has to do with the functions of manufacturing; and he looks to each of these officers respectively for staff aid and counsel in relevant matters pertaining to his operating obligation of results control. No matter how largely he delegates it, however, the responsibility for planning and results control, just as in the case of responsibility for administration, is fundamentally the General Manager's responsibility—in the case of administration, he has delegated both responsibility and authority to a number of Regional Directors who are responsible to him; in the same manner, in the case of planning and results

control, he has delegated responsibilities to a number of staff officers who are likewise responsible to him.

The next step in the organization chart, therefore, is to show the introduction of the four major functional staff heads in New York, as well as of one or more other staff officers, either functional or general, on all of whom the General Manager leans for very necessary support—and here is the second chart showing these staff relationships back to the General Manager and the President.

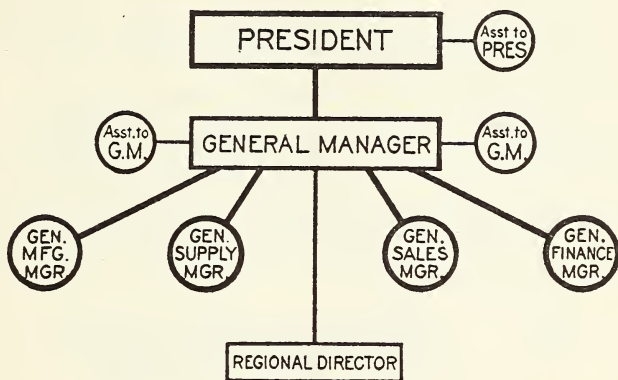


CHART II.

We see, then, that a line officer, typically the General Manager, is responsible for the three major operating obligations of planning, administration and results control. Planning and results control he delegates largely on a functional basis to his functional staff, the heads of the four departments of sales, finance, manufacture, and supply. The obligation of administration he delegates in a larger sense, including both responsibility and authority, to his line officers in the field, the Regional Directors. The Regional Director is actually the director for the home office located in the field. He is, in a sense, a territorial General Manager who happens to be located on the ground. The virtue in the work of the Regional Director lies in the projection of authority out closer to the sphere of actual line operations. The test of the nature of his work is simply that he should do in his particular field what the General Manager himself would do if, ubiquitously, he could be in each region and all regions at one and the same time. This brings us now to the next step in the construction of our organization plan.

The Regional Director, himself a line executive, inherits for his particular territory the same three major operating obligations of planning, administration, and results control in all of their functional phases, including management, sales, finance, manufacturing and supply. He is, of course, responsible for the satisfactory discharge of these obligations directly to the General Manager in New York, and he receives his authority directly from the General Manager. That is to say, there is no line of direct authority running down to him

from any of the staff executives in New York, nor of responsibility running up to them from him in the discharge of his own operating obligations. The Regional Director who has been placed in charge of a sub-group of individual operating units looks to them in exactly the same way as the General Manager has looked to him. There is the identical necessity, in only lesser degree, for delegation of authority and responsibility to the next stratum of organization beneath him. There is the identical requirement for the creation of a more immediate administration of the many details and for the creation of more specialized planning, and there is the same opportunity and logic for utilization of the line and staff operating principle in the accomplishment of these ends:

In the same manner that the General Manager delegated it to him, therefore, the Regional Director proceeds now to delegate to each of his individual Managing Directors the responsibility and authority for the administration of each of the particular operating units going to compose his region, again under all of the larger functional aspects of management, sales, finance, manufacturing, and supply. We show at this juncture in the next chart the additions to the organization plan resulting from this development.

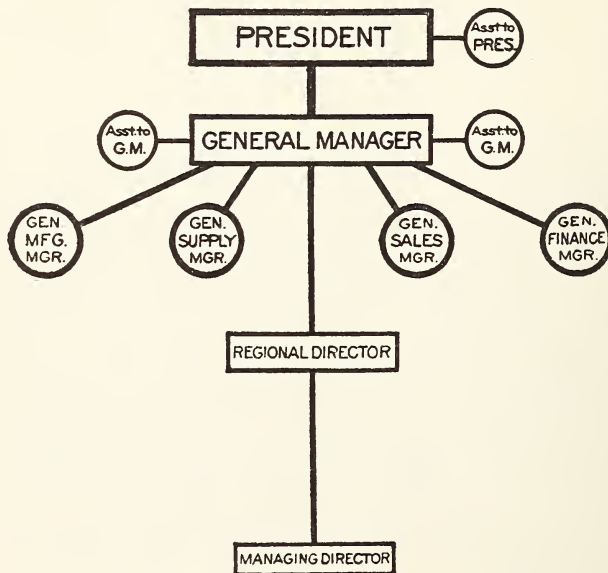


CHART III.

By the same token that moved the General Manager to proceed similarly, the Regional Director now delegates to the staff officers he has appointed the responsibility of assisting him adequately in the discharge of his territorial operating obligations of planning and results control—to a Regional Sales Manager for the sales phases of this work, and to Regional Finance and Supply Managers each for

these respective functions. He may also have one or more general staff officers whose work is not functionalized: the Assistant to the Regional Director is typically such an officer. Our organization chart has now assumed the proportion shown on the fourth panel where the staff elements in the regional level of the organization have been introduced.

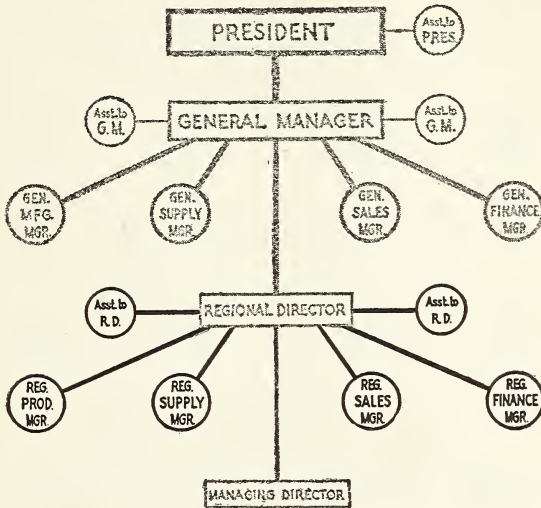


CHART IV.

The third and ultimate stratum of the organization now finds the Managing Director as the line executive possessed for his particular plant of the same three major operating obligations of planning, administration and results control. The manner in which he carries out the discharge of these obligations is similar to that in which the General Manager and the Regional Director carried out theirs before him. Authority and responsibility are again necessarily delegated to certain other officers in his own organization who are closer to the field and to the various functional responsibilities than he is himself. *In one important respect, however, a difference exists in this level of the organization.*

Inasmuch as we have at last reached the ultimate field of operation, the very theatre of war, the Managing Director finds it is both feasible and desirable to delegate to his functional department heads, not only the responsibility for planning and results control, but also the authority for the actual exercise of this planning and results control and the authority as well for the administration of each of the respective functions. The functional department heads at the plants, therefore, in contradistinction to the functional department heads in the region and in New York, are line officers. It is true that they discharge staff duties when they consult and advise with the Managing Director, but they are line officers essentially. The Managing Direc-

tor's staff proper is composed of one or more Assistants to the Managing Director. The last step in the skeleton structure of our organization shows, therefore, the following setup existing:

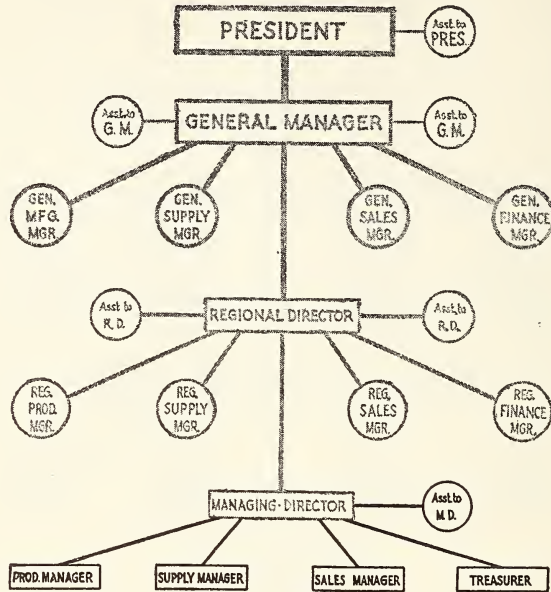


CHART V.

It is simply a duplication, in effect, of the other levels already shown, with the staff functionalization carried down to the plant itself, but with the functional officers becoming not only staff but also, for the first time, line executives.

Now, before proceeding to a discussion of the lines of contact existing within the organization structure, it will be interesting to look for a moment at a few of the essential factors and the broad definition that has been given to the line and staff functions portrayed. It was said in an earlier paragraph that no officer other than the President is either pure line or pure staff in the day to day conduct of his job. This is entirely true, but the fact in no way lessens the desirability of identifying an executive in the organization polity itself as either essentially line or essentially staff. A correct understanding of the organization requires, in fact, that this be done. The General Supply Manager, for example, is essentially a staff officer in the place he holds in the polity of the organization as a whole, and this is true despite the fact that he performs by himself or through his assistants such obvious line duties as the movement of freight to seaboard, the administration of his own personnel, and so on. In such instances he is, of course, acting in a line capacity with respect to his own subordinates as all officers must.

We discussed the certain sense in which the General Manager in

consultation with the President performs staff duties, and we must recognize as typical also the staff duties of a plant department head, for example—the man who is a line officer out in the ultimate organization level—the duties which this line officer performs when he advises with the General Finance Manager back in New York or when he assists his own Managing Director in the coordination of the control of results in his plant, or when he sits in at a meeting of the plant's inventory control committee. It is not well to say that because of a certain very necessary admixture of activities the definition of a man's job as either staff or line is impossible, because in the polity of the organization as a whole it is both possible and necessary to define the essential organization characteristic of each job. Considered from an organization standpoint, there is not the slightest doubt in any instance as to whether a particular job is staff or line.

It may throw additional light on this point to indicate that a staff officer does issue line orders to his own department subordinates, but that he can not issue orders, as a line officer can, to the body of the organization that lies in the various strata beneath him on the organization chart. That is the essential difference. In other words, a line officer exercises authority over all of the body of organization lying beneath him on the chart, whereas the influence exerted by a staff officer outside of his immediate department is, so far as it is authoritative, an "authority of ideas." The staff officers, in their functional capacities, are responsible advisers to their respective line superiors, and any direct line instructions that they may wish to see promulgated, unless special delegation is provided, can be promulgated back only through their line contact with their superiors and down thence to the line officers in the next subordinate stratum.

With these major points indicated, in however inadequate detail, it is appropriate now that we pursue the examination of our organization chart further to point out as the next essential how the structure we have portrayed is bound together with lines of contact and communication—how, in other words, the conduct of business and of operational procedure flows from the line and staff organization in New York through the line and staff organization in the region and to the line and staff organization in the ultimate field; and, in the contrary sense, up from the field through the region and to New York.

According to the organization structure portrayed in the last preceding chart, the only contact for the administration of the business and for the transmission of orders and instructions between the home office and the region is the one between the General Manager himself and the Regional Director himself. Hence, everything in the nature of policies and plans is designed to clear through the General Manager. It is obvious that the volume of material passing over his desk is likely soon to become so voluminous that he cannot cope with it. Requests from the field for further information on policies, suggestions of a relevant nature, and more or less detailed discussions of proposed moves, are all inevitably flowing in from the Regional Director. All the correspondence and contact involved is important, but certain of it is more important than certain other. The General Manager is forced to the conclusion that distinction must be made

between those things which he should or can afford to handle directly with the Regional Director, and those other things, largely distinguished as being an advisory and informative nature, which can, because of their relevance to a particular function, most expeditiously be handled between the staff department head in New York and the regional staff head in the field.

The same situation in all its elements applies between the regional organization in the plant, and in certain instances also, mainly in those of a strictly routine nature, between the New York department head and the corresponding plant department head directly, cutting out the regional insulation.

Thus, there arises on the organization chart a line of "informational and advisory contact" which runs between each department head, division head, and section head and the corresponding department, division and section in the other organization strata. For purposes of simplicity and ready identification, these lines of informational and advisory contact are shown on the chart here only as they exist for the department heads themselves. The four vertical lines shown on the chart run not only from the department head to the

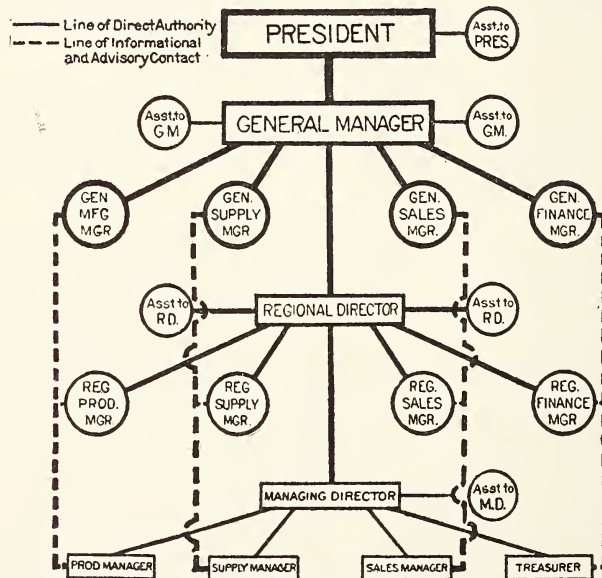


CHART VI.

corresponding department head, but also from the divisional and sectional heads in each case to the corresponding divisional and sectional heads. These lines of informational and advisory contact have very naturally been set up in our organization structure to facilitate the flow of work and to confine direct management contact to those matters which warrant management attention.

There is created within the structure, in effect, a conception of

three horizontal strata or physical groups—the home office, the regions, and the plants—held in relationship and alignment by a vertical tie of line responsibility and authority, and reinforced by four main vertical ties corresponding to the four major functions—or, in other words, what might be termed a line organization of execution, and a staff organization of ideas.

There is one other line of contact to be indicated on our organization chart before it can be considered complete. This is the line of delegated authority—specially delegated authority, it might more properly be called, since direct line authority itself exists only by delegation—which runs from the New York staff heads to the Regional Director, and from the regional staff heads to the Managing Director. This delegated authority, to exist, requires specific designation and it is exercised exceptionally and on special occasions only rather than as a matter of course. It must be recognized as a legitimate contact, however, and our completed organization chart, therefore, includes it.

This chart next to the last in the sequence shows the diagonal line running in each case from a staff man to a line man, and the process is introduced simply as an attempt on special occasions to relieve the line executive of some additional burden.

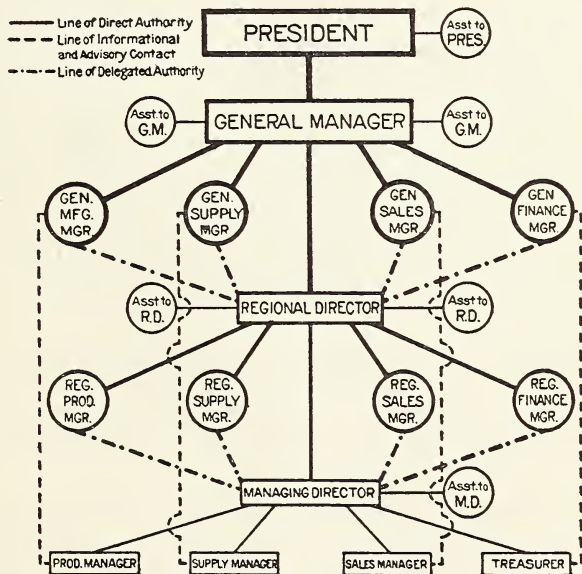


CHART VII.

Now, an effort has been made in these paragraphs to define rather specifically the three types of contacts and relations that prevail between the various strata of our organization. They embrace, first, lines of direct authority; second, lines of informational and advisory contact, and, third, lines of delegated authority. The successful day to day operation of our business demands a great deal of common sense

and good business judgment in the exercise of these contacts. A functional staff head needs clearly to appreciate the necessity for proper coordination, and he should as a matter of working habit handle through his own and over his superior's signature those things which are of management aspect. He should differentiate clearly between matters of an advisory, informational or routine nature which can be taken up by him with his corresponding functional head, and things of a management aspect which should go through his line superior.

We have confined ourselves until now primarily to an exposition of the philosophy underlying the creation of the structure of the export organization and the establishment of contacts to enable a proper functioning within this structure, both of which have been conceived in strict accordance with the principles of line and staff operation. What we have obtained for ourselves up to this point is an organization chart on paper, and perhaps a somewhat better understanding of its reason for being.

The successful conduct of our business—the successful conduct of any business—requires actually a great deal more than this. The vehicle that we have built for ourselves can take on reality and become a vital and productive thing only through its intelligent and effective capitalization and use. The concepts involved must be sympathetically regarded and practiced. Each individual must understand and accept his own responsibilities and authority and the responsibilities and authority of those with whom he comes in contact. The implications of subordination and discipline which are involved must be rigidly adhered to if the business is to be conducted efficiently. The opportunity to use the medium that has been made available depends, therefore, first, upon an understanding of the principles; second, upon possession of the wherewithal—a satisfactory product, ample capital, adequate physical facilities and trained personnel—to move forward aggressively under these principles; and, third and very importantly in a human sense, upon the will and capacity to adhere to these principles, to subscribe wholeheartedly to their letter and spirit, and to do a good job well.

It may assist in an appreciation of this point of view to set forth very briefly four cardinal principles that are seen to enter into a proper understanding of the relationship between line and staff and the place respectively of line and staff in our organization. These principles may be briefly summarized as follows:

1. Line and staff are jointly responsible for performance.
2. A line officer discharges his responsibility by taking direct action. A staff officer discharges his responsibility by furnishing information and advice, which he makes available to the line officer unselfishly and without thought of personal credit for the results accomplished.
3. Although certain staff executives are charged with responsibility that has to do with internal administrative phases of their work, this does not give them direct authority over the line forces in subordinate organization strata, nor does it relieve their line superiors of the basic responsibility for the results of their work.

4. The line recognizes the purpose and value of the staff and makes full use of its advice and assistance. In order that the line may properly do so, the staff must create for itself an "authority of ideas" and must, by competence and tact, obtain and justify the line's confidence.

Now, to summarize this review briefly, we can appropriately ask ourselves in looking upon any organization structure these questions: Does an organization plan exist? Do we understand it? Are we equipped to operate under it, and are we willing to operate under it? And a reply to those questions demands in essence the following simple answers: Yes, an organization plan does exist. The chart illustrative of the plan as we have conceived it expresses in a purely conventional form, but such a conception is necessary as a starting point, and certainly a plan, as far as we are concerned ourselves, does exist and we have tried consciously to systematize it and to identify it. Second, this organization plan involves a structure and a series of contacts conceived in accordance with the line and staff principle under which the management is responsible for the three operating obligations of planning, administration, and results control; under which a large measure of responsibility and authority for administration in all of its functional aspects is delegated territorially to the line executives; and under which a large measure of responsibility for planning and results control is delegated functionally for all territories to immediate staff subordinates. And third, we have, I think, in our own organization—and it is very important that any organization should have this—a willingness to operate under the accepted principles of a line and staff organization plan; a thing which can be accomplished arbitrarily by the exercise of the necessary supervision and discipline but which can certainly be accomplished much more satisfactorily and effectively by the voluntary inculcation of a personal desire to abide by what is inherently recognized to be appropriate—what the army so appropriately calls "indoctrination."

So, if we may revert in closing to the postulate which we laid down earlier in the paper, the line and staff principle of operation is the inevitable means that the General Manager of any organization takes, in his obvious inability to do so personally, to secure the satisfactory discharge of his operating obligations. It is, indeed, the inevitable means, it is the means by which human beings are led naturally to pool their resources to get a big job done quickly and well. It is the only means, as we have found by experience, that will work successfully. To call it by another name than line and staff, or not to recognize it at all, would result nevertheless in an automatic gravitation, in a muddled sort of way perhaps, to the very theories and practices it involves. If it had not been chosen deliberately and scientifically as the guiding principle of our operational procedure, it would inevitably have chosen itself.

Question: Mr. Smith, may I ask a question on which there seems to be some difference of opinion—honest difference of opinion—on the part of the responsible executives here in Washington. I heard no reference made in your talk to the part the Legal Department occu-

pies in your organization structure. May I ask a couple of questions, first, to whom does your General Counsel report?

Answer: To the General Manager. We look upon the Legal Department, the Auditing Department, the Personnel Department, the men concerned with governmental relations and public relations as a certain non-functionalized staff body which is distinguished from these other staff organizations and departments in that they serve the entire organization, including the staff organization itself, and not merely the subordinate strata of the line organization as these functional departments do. The Legal Department, the General Counsel, reports directly to the General Manager.

DISCUSSION

It may be noted that the word "delegation" occurs repeatedly through Mr. Smith's lecture. This principle is of particular interest in government work. Too often we see trouble arise because of too much or unwise delegation of authority, or even more often we see delegation that doesn't really delegate. No matter what the scheme of organization dictates, it is hard for many executives really to let go of authority. It would have been interesting if Mr. Smith had gone further than he did in discussion of difficulties he has encountered in making delegation of authority a living thing rather than merely a gesture. In any event, the concept of "projecting authority out closer to the sphere of actual line operations" is a live and important issue in management of government activities.

"Line and staff organization" is one management term which must be familiar to almost everyone. But the meaning of the term and how it should be applied concretely in a given situation are the subjects of endless debate. We should be particularly grateful to Mr. Smith for opening so wide a window through which we can see how the answers have been worked out in one huge corporate organization. The concept of officials as alternating between line and staff functions is particularly important. Perhaps much of the grief in government organization arises from imperfect understanding of this principle.

* * * * *

Mr. Smith's presentation of the organization plan of the General Motors Export Division is of particular interest to the student group from Agriculture in that many of the Department's Bureaus have extensive field organizations. So far as we have been able to learn, not one of them has adopted the line and staff form of organization. Some have straight line, and others have a functional line. Perhaps the latter is the more common. Further, it seems to us that the Classification Law of 1923 discourages the line and staff idea.

Yet Mr. Smith, an internationally known expert, tells us that for a large territorial organization, line and staff is the most effective. The functional line is considered effective for small organizations. In Mr. Smith's chart the four functional men become "line" in the last territorial subdivision, the actual operating territory.

We, as student employees having studied Mr. Smith's lecture, presented to us through its Graduate School, are wondering if the Department has really delved deeply into this question of organization and has reasons, based on accepted principles, for the use of the functional line, rather than the line and staff. The decision seems to rest on size; how large must a Bureau be before the functional principle breaks down? We do not know.

LECTURE VII

THE ART OF MANAGEMENT

By ROBERT B. WOLF

I WAS glad to accept the invitation to speak to you on "The Art of Management" because it afforded me the opportunity to explain to an understanding audience some of the methods that we use in industry to arouse the interest of workmen in their jobs.

Let me begin by stressing that what I have to say on the subject is not the expression of my own personal ideas. It rather voices the conclusion of a group of men who have been working together to determine the best way to achieve coordinated action in manufacturing establishments. Both my colleagues and myself have felt that making our efforts in this direction articulate might help others in industry who are striving after the same goal, and, incidentally, contribute a little to the general pool of knowledge about management.

There are, of course, many possible definitions of art. My friend Arthur Frederick Sheldon, however, coined one which strikes me as being particularly to the point. Art, he said, is a science practiced. This definition lies at the very heart of the theme that I wish to develop informally for you today.

It is impossible, I believe, to have a great art unless it be founded upon a recorded science. It results from the accumulated experiences of those who have practiced it through the ages, and it is those experiences which constitute what may be called the science of the art. There is, however, one fundamental difference between the art of management, and any one of the "fine" arts. In the latter, it is matter that is molded into a finished product. A painter creates a landscape with pigments; a sculptor carves a statue out of marble; a writer composes a novel with words. In every case the medium of individual expression is something inert. But so far as management is an art, one undertakes the delicate and difficult task of releasing human energies by integrating them around specific functions. Here the utmost caution must be exercised, for blunders in industrial management reach farther than those which an individual artist may make in his work. They frustrate men's creative activities, and cause much unhappiness, let alone the fact that they are costly in dollars and cents.

I know of no more appropriate way to define management than to read to you a paragraph from the preamble of the constitution of the Federated American Engineering Societies. It runs as follows:

"Engineering is the science of controlling the forces and utilizing the materials of nature for the benefit of man, and the art of organizing and directing human activities in connection therewith."

Now, in order to give human activities intelligent direction, it seems to me that we should have a definite conception of the nature of man. Most of our difficulties, not only in our industrial but our political life as well, I believe, spring from the fact that we have misunderstood the nature of man, and the part he plays in the processes of evolution. I shall dwell at some length on this point, for I feel that no description of particular phases of management can be nearly as enlightening as a consideration of some of the basic principles which we must recognize in dealing with human nature.

Man performs in the evolutionary processes a function that is absolutely unique. He carries the process of creation to a higher level than is possible under the operation of the natural laws governing the development of the animal kingdom. As zoology points out, the animal kingdom consists of certain genera, such as the lion, the tiger, the dog, the cat, and so forth. The individual animals within each of these genera move about on the surface of the earth, and reproduce their kind. But they create nothing. They are only focal points, so to speak, through which each generic idea finds expression; these ideas being, incidentally, the means by which man records and classifies.

Now, at the human level, there is no variety of genera. There is but one genus, the *genus homo* (also known as *homo sapiens*, because as Hendrik Van Loon explained, man still behaves so much of the time like a sap), and the outstanding characteristic of the *genus homo* is that each individual within it has the faculty of reflecting the universal life in a single organism. This faculty no individual in the animal genera possesses. Only man is a "measurer," in the sense of observing by means of symbols, and for future use, what is going on about him in all directions of space. Man alone is capable of science, that is, can arrive, by the study of symbolically recorded experiences, at the generalizations known as natural laws. Only in man, to put it still differently, is the process of creation carried from the generic to the individual.

I realize that this argument may be somewhat abstruse, but hope that what follows will help elucidate it. As the first illustration of the process taking place in the human kingdom, consider the growth of the science of shipbuilding.

At first, the savage who wanted to cross a body of water too wide for him to swim, probably observed that logs would float, so he took a log and paddled himself across. Later on, he built a raft in order that he might be able to carry a little more than his own weight. The raft was a very heavy object to carry around with him so he learned how to dig out the log and fashion a canoe (still called a "dugout") which he filled with his belongings. By and by, he found that the canoe was light enough to carry when he reached the opposite bank of the stream, and that it could be used for further explorations.

Now, the law of flotation, namely that an object which bulk for bulk is lighter than the liquid displaced will float, was not formulated until several centuries after our primitive ancestors had built the first raft, and today we build the ships of the world out of iron by applying the very same law which accounts for their sinking. Iron,

being bulk for bulk heavier than water, will sink. But we fashion it into a well braced hull, which taken as whole is bulk for bulk lighter than the water it displaces, and so the iron ship floats.

Further illustrating the process taking place in the human kingdom are the discoveries of Burbank, who has created new types of fruit and vegetables, and has done so by the same individualizing process. He closely observed the ways of nature, and by cross fertilization and grafting succeeded in producing something which nature spontaneously would not have produced without the selective and adapting faculty of an individual mind. We must realize that Burbank "created" new forms of vegetable life in the literal sense of the term. These did not exist at first. They were evolved from a careful study of existing forms of vegetation.

It is in the same way that the airplane, the radio, in fact any other of the thousands of mechanical devices of modern civilization, have been "created." Because of his capacity to reflect universal life in a single organism, man symbolically recorded his experiences. From the study of these records he formulated scientific laws, and by applying these laws to existing materials, he brought forth his new inventions.

I recall an amusing story about one of Burbank's experiments which may well be told here. While in Canada, where I lived for a couple of years, I discovered that some varieties of fruit we have in the United States can not be raised there. One of these is the watermelon. Canadians do not like "to import things from the States," as they used to say, so they asked Burbank if he would help them create a watermelon that would ripen fast enough to be raised in Canada. Acceding to their request, Burbank developed a rapidly growing watermelon, and took it to Canada. There, however, he got into difficulties, for the vines grew so fast they wore out the melons dragging them on the ground. The last I heard was that they had mounted them on little rubber-tire carriages, and that those are going along nicely.

Industry affords another illustration of the individualizing process taking place in the human kingdom. In our operations in the pulp, paper, and chemical fields, new technical devices have been introduced, one after another. In every case, these improvements were due to the creative intelligence of individual men, or groups of men within the plants.

One of these improvements, for instance, was the recording of the CO_2 content of flue gases from boilers, which enabled firemen to prevent excess air from being drawn through the furnaces. Another was the automatic control of stock consistencies. Another, a device for melting sulphur by steam so it flows in a steady stream, which removed the necessity of shoveling it by hand, and resulted in more efficient combustion. In each and every case, a new combination of existing elements was created according to laws inherent in those elements.

Creative work, however, does not necessarily imply the invention of new objects. The conscious control of an operation is likewise

creative, and of all living beings man alone is capable of it, because, as I stated earlier, man alone has the faculty of observing, recording, and evaluating.

The fireman in the boiler room has a record of evaporation furnished to him. By referring to this record, he controls the number of pounds of water evaporated per pound of fuel burned. The use of the record also makes it possible for him to compare his evaporating efficiency with that of other firemen in the boiler room.

The results of giving those records to men have been startling. Instead of resenting the use of recording instruments, they actually welcomed it, because they found that with proper instrumentation they could do their work more effectively. Operations became more efficient than ever before, and wages increased beyond any previously paid in the industry; and this increased efficiency was brought about without the introduction of financial incentives, such as piece-work, or bonus payments.

Records of delicate chemical operations were also given to the men, and by referring to them they were able to adhere as closely as possible to the desired temperatures, pressures, and stock consistencies. As a result, the various processes of the industry were brought under such effective control, that the maximum yields obtainable under existing conditions were attained. In the machine shop and maintenance departments, operating men and foremen alike were supplied with cost records, and in consequence began to think in terms of economy of operations.

Now, it is important to recognize that the effective recording of operations is an art—the art of management. The practice of the art consists in the differentiation, coupled with a continuous integration, of records into symbolic groupings which enable the individual to comprehend the results of his activities.

The problem of marking off the time intervals at which each particular record should be kept also requires much attention. In fact, management must painstakingly develop a “sort of feel of the thing” to determine the proper time interval in each instance. Where operations involve quick delicate changes, the records are kept by minutes. Otherwise, they are kept by hours, days, weeks, months, or even years, depending upon the nature of the operation.

In some of our qualitative and quantitative work, it was found that to determine major trends we had to combine literally hundreds, even thousands of records into a single figure for the year, which was plotted as a point on a graphical chart. The significance of these time intervals, of course, varies according to the operation. In some cases a weekly, or monthly record means nothing. In others, a record made every five minutes means a great deal.

It seems to me that one of the principal functions of management is to cultivate men's powers of observation, so that they will react to their environment in an intelligent way. Only thus can we hope ever to restore to those working in our highly mechanized industries, something akin to the feeling of craftsmanship of which the industrial revolution robbed the artisan a few generations ago. Encouraging potentially creative workmen to think about their jobs, is, in fact, the only effective

way I can think of to arrest their degeneration into machine controlled automaton.

In order to give you a better understanding of the creative intelligence we endeavor to develop in workmen, I shall tell you a story from the field of pedagogy. Some of you here may recall the day when our educators first attempted to teach children how to read and write, without having them previously commit the entire alphabet to memory. The method, naturally, was at first quite unpopular, especially among older folks.

One day a member of the school board and a friend of his were strolling down the street, and the latter, who was not on the board, was criticizing the "new fangled" method of teaching children how to read and write. Somewhat irked by the criticism, the member of the school board finally said, "I think I can prove to you that you are mistaken, if you will come into the next school house with me." "All right, if you let me talk to the class, I will."

When they got into the building, the class was turned over to our critic, who went to the blackboard, took a piece of chalk, and facing the sea of eager faces said "One of you children, give me a number." A youngster replied "76." He wrote on the board "67." Then he asked for another number, and another child answered "23." He wrote down "32." Now, he was about to turn to his school board friend with a satisfied "I told you so" smile, when he noticed a little red-headed, freckle-faced boy in the back of the room, who seemed quite bored by the proceedings. He said to him "Now you give us a number." The boy, who lisped slightly, replied "Theventy-theven, you thucker, let's thee you twitth that one!"

Fortunately for the human race, there are comparatively few individuals in the world who will not snap out of their mental lethargy when properly stimulated to do so. Whenever you see a man who does not take any interest in his work, you can wager, in nine cases out of ten, that it is your fault, not his. Vice-President Sisson of the National City Bank told a story once in this connection which I think is quite apropos.

Out in the middle west people do as much horse trading as they do in the east. Two men, once, who were in the midst of a trade were standing in a box stall discussing the merits of a horse that was for sale. The prospective buyer had almost made up his mind to buy the animal, but it was rather dark in the stall and he could not see the horse very well. So he said, "Let's lead him out into the open." This they did, but once in the open, he noticed that the horse bumped the fence and barked his shins. His suspicion now aroused, he led the horse to the middle of the barnyard. There the horse bumped the water trough. "Man," he said, turning to the owner, "this horse is blind." "No," the latter reassured him, "he just don't give a damn."

Experience has taught me that when a man adopts a somewhat similar "I don't give a damn" attitude toward his work, more often than not it is because he does not see what you want him to see. Open his eyes to what is really intended, and you will have a new man working with you. Workmen who did not show a spark of in-

terest in their jobs underwent a complete metamorphosis, so to speak, as a result of joining a group where records were kept which measured accomplishment. Their apathy, because of proper stimulation, gave way to an active interest in what they were doing, and a desire to improve their work.

A deplorable aspect of our modern economic structure is the "absentee management" of industrial plants. It is deplorable particularly in its psychological effect on those who administer our large manufacturing enterprises. Being often far removed from the actual scene of operations, they lack a sympathetic understanding of workmen as human beings with human reactions and aspirations. Instead, they think of them in terms of an entry in the financial reports which accountants place on their desks.

The countless facts that lie behind the symbol "labor," for example, escape them, save its dollar and cent value. It is only natural that they sooner or later come to mistake mere words and figures for the complexity of life's realities, and that as a result they find it extremely difficult to make any contribution to the art of management.

This much, I believe, can be said here, without raising any of the philosophical problems lurking behind our industrial ideology: whenever you name an object, all you do after all is to tag a label to it. But there is nothing real about the label as such. It may be described as a piece of mental shorthand, whereby you establish in your mind the similarity of the object on hand to other objects that you had previously come in contact with. The function of the label is to take you back, as it were, into the "stream" of immediate experience.

Thus, in our pulp and paper mill records, unless symbols evoke in workmen's minds actual facts, in the sense of tracing the progress of operations at definite time intervals, they are practically useless. This holds true of symbols appearing in records kept anywhere else, whether in automobile factories, steel plants, or other manufacturing establishments.

The value of our symbols, then, coincides with the meaning they carry for the workmen, for it is only in the degree that a man really understands them that he can be expected to show any interest in his work. Confront him with an array of strange charts and figures, and you will get little or no response. Give him, however, records that mean something to him, and he will cease to be indifferent. The presentation of records in a manner that endows our verbal and mathematical symbols with meaning, so that men actually can use them as a yardstick of their accomplishment, is, I would say, the essence of the art of management.

Speaking of the confusion of symbols with realities, I have so far alluded to the symbols that we use in the operating records of our industrial enterprises. Think, however, of the controversies that result from the same confusion in formal economics, that maze that Alfred Korzybski calls "high order" abstractions. First, we throw a multitude of facts together, and label them "capitalism"; then we throw as many different facts together, and call them "socialism";

then we launch into prolonged disputes about these symbols, oblivious to the ever changing background whence they were derived.

So long as we recognize that we are abstracting, "capitalism," "socialism," "value," and so forth, are useful for the purposes of memory and communication. But they should not be mistaken for realities. It is usually easy to understand words indicating real objects about us, but it is difficult, sometimes impossible, to agree on what high-order abstractions of this sort refer to. The indefiniteness which surrounds them is itself symptomatic of their distance from the realities of daily life.

The same may be said of our controversies in other realms of knowledge. In politics, for example, we argue about symbols like "fascism" and "communism"; in religion about "protestantism" and "catholicism," and forget that unless we can find their sensory referents (in the words of C. K. Ogden) in the surrounding universe, we are arguing about empty sounds, unrelated to human experience.

I believe that some day, when mankind will have come of age, it will awaken and laugh at itself for having been so childish as to quibble over symbols.

I recently returned from a trip abroad, where I had the rare good fortune of attending a conference of Sweden's industrial and labor leaders. Manufacturers in Sweden have one large, comprehensive organization, which corresponds somewhat to our National Association of Manufacturers in the United States, except that it has a relatively much larger membership. Again, votes are not given one to each company represented. The number of votes varies according to the number of employees in each company. Labor was represented at this conference by the leaders of the entire Swedish Labor Movement. They invited me with a friend to meet them at luncheon, where we were accorded the privilege of asking them questions. They had gathered together that day for the purpose of working out a solution of some of their problems, so that it would not become necessary for the government to tell them how to conduct their affairs. With refreshing realism, they asked themselves at every turn, "Just what do we mean, here?" It was a treat to listen to their realistic approach to their problems. Here was no mistaking of symbols for realities, no "a priori" thinking such as we fall into when discussing economic problems, little rationalizing to justify personal emotions or prejudices. To determine their course of action, they simply went back to the facts as they had observed them, and not one of them persisted in forcing his own conclusions on the rest.

Needless to add, it is the high degree of self-government attained in Sweden that makes the practice of the art of management possible in their industry. Without self-government, and wherever people live in an atmosphere of repression and fear, there can be no art of management. I became convinced of this truth on my visit this summer to some of the European countries governed by dictators. It would be a long story, however, to tell you here of the industrial set-up we found in those countries, so I must leave the story untold.

I do not propose to wind up these informal, and somewhat loose

comments on the art of management with an excursion into metaphysics. As an engineer, however, I do not have to be told that there is such a thing as Law in this world of ours, and further I can not conceive of a Law without some guiding principle back of it, that is, a Lawgiver.

I know that if I fail to conform to natural law, any devices I may create simply will not "work." Therefore, I never try to bend nature to my personal will, but merely seek for knowledge in order that I may conform to the ways of nature.

If I have succeeded in impressing upon you this afternoon that man is a free creative agent of the life of the "spirit," then you will agree with me that any attempt to dominate the will of another individual can, in the final analysis, have but one result. It will simply retard his development.

As an executive, I avoid making arbitrary decisions of any kind, for no sooner I "give orders," and tell people what to do, than I build up resistance against me. The only way in which I can hope for freedom myself is to stimulate in everyone associated in any way with our organization the desire to do his own thinking, and the willingness to deal with others down the line, just as I deal with those whose activities I have the responsibility of coordinating.

If you systematically gather facts, and use symbols so that they really express and measure quantitative, qualitative, as well as economic progress, you will never have occasion to be arbitrary in your decision. For the facts that are presented to you in this manner become themselves the deciding factor. All you need is to "see" the answer, and you will inevitably agree with those who are presenting the facts to you.

By way of conclusion, then, enlightened management arouses within every member of an organization the desire to work in harmony with the purpose for which the organization exists. If you can succeed in making a man conscious of that purpose, and the organization itself conscious of the degree to which a man is helping fulfill its purpose, then you have raised management to an art founded upon real science. With this thought, and my thanks to you all for having followed me with such close attention, I bring the main part of my talk to a close. It has been necessary for me to speak in broad terms, and there may be questions that you would like to put to me. I shall be glad to answer them at this time.

DISCUSSION

Here again in Mr. Wolf's talk we have emphasis on the human problem. It is easy to see that to the speaker human relations are the dominant aspect of management. His most pregnant phrases are focused on those aspects: "... the delicate and difficult task of releasing human energies by integrating them around specific functions . . . definite conception of the nature of man . . . man still behaves so much of the time like a sap . . . cultivate men's powers of observation so they react to their environment in an intelligent way. Encouraging potentially creative workmen to think about their jobs . . . few individuals in the world who will not snap out of their mental lethargy when properly stimulated to do so."

Here are glimpses of an art—a very high art of management. But it needs

to be added that "art is a science practiced" and that the science of management is mastered only by the same sort of study required for mastery of any other science.

But more specifically Mr. Wolf tells us records have an important place in the art. Not just any record, but the particular record which may through symbolic grouping enable the individual worker to comprehend the results of his own activities. Such records, when properly used, "restore the feeling of craftsmanship" which the machine has taken from him.

The difficulty is in determining which are the "right records" and what is the "right time interval." The symbols used must not be just marks on a piece of paper but such that when seen "represent facts in the minds of the men." In other words, the records must be "yard-sticks" with which the worker, and his associates, can measure his work progress and accomplishment.

We agree with Mr. Wolf on the value of records. We all know that baseball, for example, would not be what it is today without the player-performance records published daily by the press; we agree also that the determination of the revealing record is difficult. Checking this view of records against our own experience, we feel that too often we have been cheated of this "energy-releasing" stimulus. On the other hand, in some activities government organizations can show a high record.

For we know that here and there throughout the units of the federal government, in States and municipalities, earnest men and women strive constantly to foster application and growth of the art of management in public service. We know this but we know it only in a haphazard, vague fashion, and the rich benefits of such efforts rarely spread beyond the group or unit in which they have their origin. How much more rapid would our progress be, how greatly enriched the whole field of public service, could there be provided an overall medium for dissemination—a forum—through which this art or our particular branch of the art might fully emerge.

The establishment and operation of such a forum would surely be a highly profitable addition to the federal organization structure and budget. This comment, inspired by Mr. Wolf's lecture, merely seeks to point the need and express the hope that in this or some other way it may soon be met.

LECTURE VIII

THE EMPLOYEE AND MANAGEMENT

By C. J. Hicks

I WARNED the people who asked me to come here that I didn't know a great deal about government service, but I was urged to come and talk about some of my experiences in connection with industrial relations.

From time to time, I have been asked by numerous educational institutions to talk to the classes in economics and tell them something about labor relations in the company with which I was associated. Fifteen or twenty years ago I found at every institution where I was invited that I was the only speaker they had chosen who knew anything about labor relations in its practical aspects. The professor was studying something written on the other side of the water. He was discussing capital versus labor, and so on. I objected rather vigorously to calling that sort of thing industrial relations. "But," I said, "you are not studying labor relations, you are studying what happened years ago."

I have been very glad to find the college presidents with whom I have talked responding to my suggestion that labor relations should be taught differently. I am having the great joy later in life of helping build up in several universities a more factual approach to labor relations. I have suggested they secure a professor who knows something about labor relations, encourage him to go out into the field, get in touch with the big industries, and learn what they are doing today—not what happened years ago.

In this way, I have been somewhat related to educational developments in recent years, but my work has been in private industry. I hesitated to talk to you on that account. The more I thought of it, however, the more parallel our situations appeared to be. You, of course, have more stockholders than the Standard Oil of New Jersey, the American Telegraph, or other private enterprises. In all these companies the relationship has become one not of capital and labor, or employer and employee, but management and employee, because with a large number of stockholders, which is as true as it is of you here today, we are all interested in America. We may be employees in some particular department; you may be in the management or in the class known as employees, but we are all generally interested in America.

As I went to the many different sections in which the Standard Oil of New Jersey operates, both in this country and abroad, I found large numbers of stockholders among the employees who were getting away from the idea of capital versus labor.

I frequently have been reminded of the remark made by Lincoln when he was talking to a group in New England. He said that America was distinctive in that here a man today may hire his labor

to someone else; tomorrow he may be working for himself; day after tomorrow he may be hiring the labor of other people. He was passing from one group to another. The people who get up in management are no more stockholders or capitalists than the men who are down in the ranks. We have had a larger percentage of stockholders among the working men, including the colored men, than among the management, which clearly indicates the employees were interested as partners in that enterprise. I am very glad to remind you of the fact that we are interested in what is developing in industrial relations whether we happen to be in management or in the group known as the ordinary employee.

As I have just returned from Wisconsin, there comes to my mind what the new president of the state university recently said, "Cross currents of American life have confused most of us; we have but little sense of direction." That assuredly is true of labor relations. We have had a good deal of strife, many things have confused us, and we have but little sense of direction.

At a time like this, there is room for some very honest differences of opinion. Perhaps there is always room for that. If there was ever a subject in the curriculum where one could have honest differences of opinion, it is on this matter of labor relations. If I appear to be dogmatic, it is merely because I happen to have the platform now. I am reading every side of this case and trying to keep track of where we are going, trying to keep in touch with all classes in industry that are interested in this matter of labor relations. I am reminded of one thing I learned in college. I heard Theodore Parker deliver a lecture. Speaking on this matter of being dogmatic, he said, "If you hear a man proclaiming loudly 'it is nine o'clock,' just ask him, 'where?'"

There are so many sides to all these questions, it is a time for open minds and calmness, rather than excited partisanship. Don't go just by newspaper headlines. You must discount them a great deal, as you know. In a period of uncertainty such as the present, one's understanding of existing conditions is often clarified by looking back at the course of developments. During my lifetime I have observed four important steps in the relations of employees and management.

When I was finding a way to get through school, I went to work in a foundry and some other places, under a system that might fairly be described as "autocracy of the employer." We, the employees, didn't have much to say as to labor conditions; management settled them and we were lucky to have a job. We took what was offered us. That was true and is true yet in large sections of American industry, but it was universally true fifty years ago. It is the basis on which American industry was developed, but as I discuss this subject, as I have an opportunity, with many leading industrialists, I don't find they are very anxious to maintain that autocracy.

In our practice and in our thinking, we have come a long way from the old idea that labor conditions are nobody's business except that of the boss. The farmer still has that idea, the housewife, perhaps, has to have it in the home, but in most sections of industry we have come a long way in realizing that this is more of a partnership

matter than it was in the early days. The settlement of a great many matters is of interest to the employees as well as the employer. One of the factors that has brought this about is the second step, which I have watched with a great deal of interest—that is, development of the labor union movement.

We all know the labor union movement is militant; it wouldn't get anywhere if it weren't. That is very much to its credit. It doesn't need to be quite as militant as it has been, perhaps, in the last year or so; yet it has secured the headlines and it stands on wrestling from the employer the things that the employee feels are fair. As I said, I have watched this movement grow. I knew Samuel Gompers rather well; I know both Green and Lewis well. I have nothing but praise for the way in which in general the American labor movement has developed as compared with labor movements in other countries. I am sure every friend of the working man hopes this row, whatever it is, in the C. I. O. and A. F. of L. is going to be settled. We need a strong united labor movement in this country.

Having made that clear, I want also to make clear that I haven't belonged to a labor union, although I have worked in a great many trades. Out of 25,000,000 workers, the average youth doesn't belong—he doesn't have a chance. There are 7,000,000 union members in both groups. There are about 5,000,000 union members in England after all the years of labor unionism. Greatly to their credit, they have kept a steadying influence in England in many ways in fighting for the rights of the working man. The American movement is well organized; it deserves to have more influence than the number of members indicates.

First, we had the unchallenged autocracy of the employer. Development of the labor movement has had untold influence upon the employers of this country, not only those who have signed contracts but those who have not signed contracts. I give them great credit for it and for that reason, as one who wishes the very best for the working man, I hope we shall have a strong united labor union movement in this country. Don't imagine that we are going to have twenty-five million—American workmen don't respond readily to the suggestion that it is their duty to join a labor union; they don't pay their dues unless there is some reason for paying them.

American management woke up long ago to the fact they should treat employees differently from the old autocratic ideas. First, the autocracy of the employer; then, gradual development of the labor union movement, and its remarkable influence; third, the gradual development of employer and employee cooperation on a basis of unity of interest. America has been a leader in this respect. If you inquire into the situation of other countries, you will find a line fixed between labor and capital. A man gets up to a certain point—he doesn't get into management beyond a certain point—he stops right there; his father stopped there. That isn't true here. One can go from the bottom to the top if he has the ability. I hope that will always be the case. American managers woke up about twenty years ago to the fact that it was going to be worth while to pay more attention to employees. I don't blame them too much that they didn't

pay attention before. Labor was very plentiful. I have seen five hundred men outside the gate of a plant clamoring for jobs, at a time when every plant presented a similar scene. The management naturally gave attention to the machine and the development of processes. Today, an employer has to seek for labor; a very different situation from what it was in those days.

The employer began to take an intelligent interest in his employees long before the scarcity of labor was in evidence. I believe one reason for this is that the members of management have practically all come from the ranks. They know this game from start to finish. Very seldom do you find a rich man's son thrown into industry and started in a position of responsibility. The men who are there are men who have worked their way up and understand the needs of working men. The men know that; they know that those at the top understand the job and understand the workmen's needs as well as they do. That has helped in bringing employees and management closer together. I am talking about real unity of interest with the door wide open for advancement and promotion. This employer and employee relation on a basis of cooperation—not autoocracy, not militant, not fighting for it, but just good business and good sense—fosters unity on that basis. The now despised “company union” developed during that period. One of the best things that ever happened to working men of this country was that some of the leading industrialists abandoned the idea of discharging a man for joining a union. They said, we can't possibly deal with these thousands of men; let's invite them to elect a representative. It seems to me it is very much to their credit that they initiated employer-employee representation plans and, at the same time, agreed not to fight unionism because in every case it was on the level. The employees were in organization fields where they had no unions, where the union had never entered, hadn't dreamed of entering. Employers said to them, now elect your representatives and we will sit down and talk it over. This development was a long step in advance of what we had been doing, because, as I say, it went into most fields where there was no unionism and the unions hadn't entered at all.

Another development during this period of cooperation was the realization by many forward-looking employers that they had to have some kind of a labor policy. They found that a large institution couldn't be run without employees knowing something about what the policy of management was. For many years it was taken for granted that the foreman would explain policies, but often the foreman didn't know what the policies were. Today there are still corporations that have no formulated labor policy. No wonder they have trouble; they deserve to have trouble.

I want to give you some illustrations of what is covered by a labor policy. There are nine points that are pretty generally included.

The first one is that the employer finds he must guarantee against discrimination on account of joining or not joining a union.

Secondly, he tells them something about his wage policy. Wage is a very mysterious thing. What does the working man want? He wants at least as good a wage as he can get in any locality. So most

employers have said, we expect to pay the prevailing scale for similar work in this locality. If the employee finds other employees in the vicinity get more money, he lets his employer know it. If the employer lives up to that policy, he adjusts his wages. I have been questioned many times concerning what would develop if all employers followed that policy. But they don't, although the forward-looking employers are working in that direction.

A third item, this employer instead of waiting for a demand will volunteer to arrange for fair working hours. Most of the reductions have taken place with steady pressure from the unions but also through voluntary action on the part of large numbers of employers. I know the Standard Oil of New Jersey abolished the seven-day week. In this continuous process industry, it was the natural thing to develop a seven-day week. Then the hours were reduced, 12-hour to 10-hour day. In that company, there is now a 36-hour week—not on account of any pressure whatever but because that has been the trend in this country as a result of many influences, including legislation and union activity. But the forward-looking employer doesn't wait for that pressure. He adjusts his hours so that his employees are rather proud of the fact that they are working for him.

The fourth point has to do with sanitation in a plant. You don't know what abominable sanitary conditions there were in our plants in this country twenty years ago. A good many employers remedied that situation, and then following that action by the employers came the state legislation. They sent the state factory inspectors around to bring up the backward employer. This is accepted now by all employers. It is good business to provide sanitary conditions.

Fifth, the employer will have it clearly understood he doesn't expect an employee to suffer injustice. If employees know that they may appeal, maybe through a union, maybe through a representative they have elected, maybe personally or through the foreman, they know that the company doesn't expect them to put up with any injustices.

Sixth, this employer I am speaking of will make it clear that promotions are being made in accordance with ability as well as length of service. He is not bringing men from outside and putting them over the men that have been there and have the ability. He doesn't say twenty years' service gives the entire advantage over a man of ten years' service, but gives service its place. It is recognizing seniority to that extent.

Seventh, his partnership has been such that he will gladly share profits on some basis that he can afford, that will satisfy and stimulate his employees.

We are getting out a book just now in our organization; I'm not trying to sell it because we aren't making any money on it, but we have had a certain professor of the University of Pennsylvania study all the methods of profit sharing up to the present time. It is being waited for. Last year there was greater sharing of these profits with employees. The forward-looking employer is not waiting for demands—he is going to treat these people as partners. They are something more than silent partners; they are entitled to some of the profits that are being made.

Eighth, he will encourage continuity of service. The cost of turnover in itself will lead any sensible management to attend to that. It costs considerable money to bring these young men in and train them. The turnover has gone down tremendously in this country year by year.

Ninth, he cooperates with his employees on some basis to provide an assured income for old age. The Social Security Act, which is a step in the right direction, has only provided low benefits for most workers. Employers, therefore, have been stimulated by the Social Security Act to try to supplement the federal benefits. There is a great movement for strengthening our pension system. By strengthening, I mean making it a real pension system instead of a hope of something, and having employees help pay for it so that security in old age is assured. Pensions are now growing up on that basis, rather than "if you are in our service at 65, we hope we can give you a pension." Pension plans of that type are being modified very rapidly.

Now to turn again to our steps in the development of labor relations, there has been a fourth step. I have mentioned three, autocracy of employers, the labor union movement, and employer and employee cooperation. The fourth is recent legislation. I was an industrial relations executive when we didn't know there were lawyers. Then the compensation laws came along. If we were in trouble on account of compensation, we had to send for the lawyer. Now, the industrial relations man pretty nearly has to have a lawyer with him, as there are so many things being covered by legislation that formerly were not. Conspicuous among these laws is the Labor Relations Act.

I should like to review briefly some of the conditions that led to that act, as I see them. The employer brought it on himself. Many employers were discharging men for joining unions. I am very proud to say I have never worked for and wouldn't work for a company that followed that practice. As I said before, an increasing number of companies have announced that men have a right to join a union if they wish. They can have representatives of their own choosing if they wish, but that wasn't the general practice, and there were labor spies, although they were not quite as numerous as you might think from reading some of the sessions and minutes of the committee in Congress.

Then came the depression and the N.R.A. What was Section 7 (a)? I was here for three months with the Labor Board staff trying to help enforce 7 (a)—that every man had a right to join a union if he wished—that is all it was. Section 7 (a) as enforced by the first labor board put a stop to this practice that had grown up among various shortsighted employers. I remember one of them said to me, "I guess this hard-boiled stuff is over with." I said, "You bet it is. The government is after you; you can't discharge men for joining a union, you can't discriminate against them in any way; if you do, it is going to be stopped." All the government asserted was that a man had a right to join a union.

For a time the unions were gaining much ground, but employers were waking up and treating employees so well it came to be rather difficult to get men to pay their dues.

Then the unions asked for and secured the Labor Relations Act. It was largely their act in which they jumped a long distance from the right to join a union to a policy of collective bargaining in this country, and it has rightfully been construed as almost an obligation for a man to join a union. That is quite different, it doesn't work.

But we have come to a point where the government seems to be committed to prodding men into collective bargaining through labor unionism. It isn't working. I think one of the greatest mistakes was to request that the government should ask that. You can sell a man membership, but you can't coerce him. All they had a right to ask was that that door be held open so they could sell organization to the employees who needed it. I think they made a mistake—I think that the pendulum will swing back, but the legislation has resulted in establishing the right of a man to join a union if he wants to. That is a long step from fifteen or twenty years ago.

From my contact with employees, I say that whatever the legislation may be, whatever the decision may be as to labor unionism, neither of those things is a substitute for friendliness, whether a union is joined or not. They need the friendliness of the management, the thing that has made America distinctive. My chief objection to the Labor Relations Act is that whenever the employer shows friendliness, he is likely to be accused of coercion and undue influence. There is a lot of nonsense about that. You don't use undue influence that way. You can't treat the American workman that way. He has too much independence. It doesn't coerce him for the boss to be friendly with him.

But whatever we may come to, I believe we are going to swing back to friendly relations in large sections of industry, I don't say all sections. Many an employer doesn't deserve friendly relations with his employees. I am talking about industries where the employees were satisfied, but where today there is a sort of strain. There is a sort of dividing line for the first time in American industry. Speaking as a veteran, I truly believe we will get back to friendly relations again. Just following the War, I was in Washington at a conference known as the President's Industrial Conference. There was a report issued that has a lot of good sense in it. In it was a significant statement which ex-President Hoover quoted at a meeting of employers in California, "It is the part of statesmanship to emphasize the areas of interest rather than the areas of conflict." It is useless to deny there are some areas of conflict; in fact there are a good many areas of interest. It is the part of the workman to emphasize the areas of interest rather than of conflict. There are statesmen who are going to do what they can to encourage unity of interest, rather than division of interest—division into classes. That is the reason I am rather optimistic about the future.

I haven't quite as much time left as I intended, so in conclusion I want to see if I can't get somebody to disagree with me.

Mr. Keplinger: As Mr. Hicks indicated, he would like to have some discussion or questions from us. I know you all have been interested in the things you have heard him say and also that some of you have

questions, whether or not you express those questions, but now is your opportunity. Who will be the first?

Question: I wonder if we could induce you to offer some suggestions or comments on labor relations in the Department of Agriculture?

Answer: No.

Question: As you might expect, the majority of the employees are deeply steeped in traditions of individualism quite adverse to organization, especially anything that savors of union or labor, but nevertheless there are organizations, some of them active and believing that they have grievances, anxious to go ahead establishing relationships. On the side of management, as you would expect, there are those who have deeply sympathetic points of view toward employee organizations. Others think they have until it comes to the point of negotiation, when they suddenly find they don't want anybody to tell them how to run their business, and many other potential Tom Girdlers. In that general situation, there is a good deal of activity at the present time. Relationships are being established, precedents are being formed, principles are being laid down. I hope that will tempt you to offer some observation.

Answer: I am afraid I would be following the course for which the professor was criticized. I should be very sympathetic with some method of having these grievances straightened out. I don't think it is going to be unionism or a committee; it can't be by each individual going to his boss, because that doesn't work. I never wanted to be a kicker. I would swallow my grievance first, but it is different if you can go on behalf of someone else. I firmly believe in the principle of representation. I don't know the situation well enough to suggest whether you have to fight for it and organize a union.

That isn't dodging, that is just confessing ignorance.

Question: You spoke of the right of appeal as a protection against injustice. Is that carried to the point of a right to appeal to an outside body or arbitrating body in case there is an impasse between management and the employees?

Answer: It is in a great many cases, although it is hardly ever taken advantage of. My contacts with employees in these large industries have been that if they can get an opportunity to get on up to the big boss, they are satisfied with his decision. Even though there is a provision for arbitration, they seldom take advantage of it. They want to get uniform treatment and they want to be sure it is the policy of the company. I have advised employers to be free in admitting the need of arbitration.

DISCUSSION

Labor relationships in industry, according to Mr. Hicks, are no longer accurately described as of capital versus labor, or employer and employee, but rather as of management and employee. Despite increasing numbers of stockholder-employees in some industries, and conceding that "we are all interested in America," the feeling remains that the relationships under discussion are quite different in the government from those in industry in general.

In the first place, every government employee is definitely a stockholder in the enterprise in which he or she labors. A portion of every pay check in one or

another form of tax goes back to the federal, state or municipal treasury, or portions of all of these. Each has a definite share in public assets and public liabilities.

Second, in many units of government it is difficult, if not impossible, to classify the personnel in two groups, "management" and "employees." The two often become so indistinct as to merge for all practical purposes. Bureau Chiefs, Division Chiefs, Section Chiefs, Stenographers, Auditors, Field Officers, all may be and often are members of the same Employees' Union Local.

We are more like those members of a big family who stay at home to help with the household duties while the others go out to earn and bring home the bacon. The "others" in this case being every citizen outside the governmental set-up. As between the daughter who makes the beds, and the mother who performs more difficult tasks, there is no management-employee relationship, but rather only difference in work assignments based upon qualifications and experience. They have in fact complete community of interest. This relationship is much more real among those in government than it can be for a long time, if ever, in capitalistic industry.

All this is in no degree an attempt to prove that government work relationships are better than in industry but merely to indicate a difference. Let us not too readily assume parallels and attempt to follow slavishly industrial procedures and techniques. To do so is to invite avoidable difficulties.

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One thing that has impressed us as students is the fact that while our government is democratic, the government of a government department, until quite recently, has been extremely autocratic. But that situation is changing. This new impetus to the extension of democracy to industry and the new recognition of the "human" attributes of the worker are being felt in government units as well. Employees in government are demanding more than just a job and a check; they want a part in the affairs of their Department. Things now are in a changing, formative stage. We are moving forward en masse. To where?

LECTURE IX

THE PUBLIC'S INTEREST IN PUBLIC MANAGEMENT

By MRS. W. F. GREENOUGH

I AM sorry I could not have heard all of your lectures on administrative management. Certainly today the public has a great stake in the manner in which various things are done in the government. More and more we know—it is such a truism that it seems almost a shame to repeat it—that we have government problems which are growing in complexity, growing in diversity, and which need more and more technical knowledge to solve them.

I heard Mr. Dykstra say once that he thought it was a very nice mental caper to think of all the things you could that government was doing; that you might take the alphabet and go through it to see if the government was really doing all the things that each letter of the alphabet signified. Taking out the last three letters of the alphabet, because, really, they are pretty hard, I think every one of us here could make a different list of those services which government is performing, and still not repeat.

Of course, in this particular group we would think that "A" naturally would be for "agriculture," "B" for "banking," "C" commerce, diatetics, economics, fire protection, game preserves, housing, investments, jails, knowledge and its advance, land, mining, navigation, oil, planning, radio, sewage disposal, teaching, unemployment problems, vaccination, waterways, x-ray, youth and zoning.

All of those are legitimate and very challenging problems of government today. All of them need to be done well and all of the lists of services that you might make from your own experience with government probably need to be done well. What is the machinery by which these things can be properly done?

Now, I am going to be quite specific, I am going to take Mr. Kep-linger seriously and talk to you about those things which have been nearest to me because I think that in so doing I will be able to give a personal and a warmer touch than if I were talking about those things about which I had had very little experience. Therefore, I am going to say categorically that administrative management has as its keystone the persons who run the business of government, that is, that it is so very important to find the right persons to run the business of government that this is the keystone to the whole problem of getting good administration.

And then I am going to talk to you about the interest of the League of Women Voters in this problem, because this organization has taken the challenge of the problem quite seriously and has appealed to the country as a whole in solving it.

More than three years ago when the League came together in conclave at Boston, we discovered that we were all converging on this one point, from a program that embraced a great many different

things, such as neutrality, the collective peace system, housing, taxation and budget making, and the reorganization of government to promote efficient administration, school finance, organization and personnel, unemployment compensation, and old age assistance. From all of these things which women had decided were the political issues of vital importance of the moment, the delegates voted to concentrate on this problem of personnel.

Now, that was a rather amazing step to take and perhaps we should pause for a moment and think why women who have been interested in such diverse fields as education, as child welfare, as economic welfare had come to this conclusion. It was this—for sixteen years we had been experimenting with the passing of laws. We had done a pretty good job in passing legislation which was good, only to find that we were being frustrated because the laws were not being administered well.

In my own state a school attendance-child labor law was passed which was a good law—it still is a good law—but it depends almost entirely upon the caliber of the school attendance officer. If this person is a person who understands all the intricate social conditions that usually surround non-attendance at school, then it is well administered and the law means something. If this person is not of a caliber to understand these social conditions, then the law means nothing. It is just another law on the statute books.

So we discovered to our dismay that we had to do more than pass legislation, that we had to be extremely interested in how these various laws were being administered and that that was the keynote of the whole thing.

Certainly the public should be interested in this problem; the public is involved to the core; the public pays the bill; the public gets the services; but arousing the public to this problem is another thing. I don't know anything more challenging and more entertaining and harder to do than to arouse this great octopus of public opinion, this great sleepy octopus that would rather lie quiescent under any kind of wrong than to bestir itself or, if it does bestir itself, would rather frolic in the daisy fields of fancy where incredibly beautiful women and amazingly handsome young men have romances after the movie style. That is the sort of thing that really makes the public interested and really arouses them.

So to arouse them on a subject, which after all is a little difficult, is quite technical, is a challenge to the ingenuity of those attempting it. Perhaps you will be interested for just a few moments to trace the development of the opinion making campaign for better government personnel upon which we launched. The first step was to undertake self education, for it was not conceded for a moment that very many members knew anything much about the subject except that they had a feeling of indignation at the waste of the spoils system. The average member of the League became the sounding ground, the way to delve into the public mind. After a certain number of meetings, study groups and conversations with persons outside the League who had not given the subject much thought, there came to be a pattern to the doubts and questions that appeared. First of all, we dis-

covered great confusion concerning words. When you spoke about "personnel administration," or "methods of recruitment," when you said "orderly progression to higher posts in the chosen governmental field," or "proper retirement provisions," you were using words which went through the average person's head without anything to hold on to. The words slipped in one ear and out the other and meant very little. As a matter of fact, we discovered that the words "personnel" or "qualified personnel" meant to many people something that vaguely had to do with "personality," and suggested something like Dale Carnegie's engaging book, "How to Make Friends and Influence People." Words had to be found to bring the problem graphically before the public. In order to do this, a slogan contest was initiated. The prize was small, but a great many people put their wits to work to find words which would mean something to the general public. The prize winning slogan, offered by the wife of a Harvard professor, was "Find the man for the job, not the job for the man." I think that is a pretty good slogan, only I don't think that it brings in the fact that you not only have to find the man for the job but that you have to give him flexibility, you have to give him enough leeway so that he does his best in the job, so that he isn't held in by too rigid procedures, so that he can really advance to positions of distinction and honor in government service.

Another slogan which I think had the second prize was "To the victor belongs the responsibility of good government," which I think has a ringing tone to it. It means something.

So the words were hard to find in the beginning. After we thought that we had some words which might mean something, we discovered that in a great many peoples' minds was a feeling of apathy. They felt that nothing could be done about it, that patronage always would be part of the party system and that it was an inherent part of democracy. A little history soon cleared up the situation, by showing that patronage was a pernicious growth that came after 40 years of administration under the new constitution. It was a little harder to face the deepseated feeling that the parties could not live without patronage. It was a little harder to persuade people that we were really thinking of the public interest, not of private interest. It was a little hard to be sure that those to whom we were talking realized that it was not an attack on the party in power, because wherever we had this sort of thing going on we had a party in power and very often that party in power was guilty of a good many patronage appointments.

However, having had some sixteen years' experience in the League of Women Voters in the art of being unpartisan and in being dedicated to the public interest, this was not an insurmountable problem. For instance, when we had a personnel day on the radio with a national hookup, we had Secretary Roper, we had Governor Fitzgerald of Michigan, and we had Mayor LaGuardia of New York, showing three different parties in three jurisdictions of government interested in this problem.

We had a dinner here in Washington where we really propounded this question, "Can the parties live without patronage?" And there

we had Senator Vandenburg from Michigan saying that a party that can not live without patronage deserves to die. And we had Senator O'Mahoney saying not only is it the most efficient thing for the party to do, but that it also provides a bulwark against the importunities of the unfit. This is just another way of expressing what a Senator from my state said, "Whenever I appoint a postmaster, I make fifteen enemies and one ingrate." Which is, I think, generally true.

Certainly if any of you take party responsibility seriously, you realize what a terrible thing gnawing at the vitals of every party is the malady of patronage. Under the patronage system as practiced in this country, our political parties have become instruments of bribery instead of party responsibility, and parties without such responsibility are the very negation of democracy. Only effective nonpartisan effort can free the parties from the patronage incubus of which they are the victims as well as the authors.

For example, a governor in my own state took office in the worst of the depression. It was almost impossible to get in to see him, for weeks at a time, because his office was crowded to capacity and the corridors leading to his office were crowded with office seekers. His time, when the legislative session was getting under way and he should have had a legislative program to present to them, was taken up by persons who wanted jobs for themselves, their friends or party workers. The importunities of job hunters are not confined to a party basis. Some of the most persistent and hardest to refuse are those who are above asking for outright patronage, but who feel justified in applying for jobs for their down and out friends.

It was such an appointment which caused a recent tragedy in Chicago when one of those great water towers on top of a business building crashed through seven or eight stories, killing ten men. When an investigation was made it was discovered that a newly appointed building inspector had inspected the water tower just three days before the accident. When called into court, he testified that the water tower had looked all right to him but admitted that he had no specialized knowledge on which to base his conclusion. His immediate superior admitted that he had appointed the inspector because he was a fine young man, an automobile salesman out of a job, and had a nice wife and baby. It might, of course, have been more logical to consider the ten who were killed. Perhaps they had nice wives and children also, who were left bereft by this sort of soft-hearted carelessness.

There were other examples of waste, unfortunately legion in number. There was the waste of building handsome buildings to house young offenders, and then appointing superintendents who were incapable of handling the young people committed to the institutions so that they might become self-respecting citizens. There was the waste of building roads with appropriations for good material and very little for qualified engineers. There was the waste of training persons to do government jobs and then turning them out in favor of untried workers with each change of administration. There was the waste of mistreating faithful and efficient public officials by lack of appreciation or indiscriminate villification.

As these examples multiplied, we felt the need of calling them to the attention of as many groups as we could reach. We organized speakers' schools and training courses, in order to learn how to present our case simply and dramatically. Seven state Leagues reported 196 such trained speakers. They spoke to an amazing number of groups: Rotarians, Kiwanis Clubs, grange meetings, labor meetings, women's clubs, parent-teacher organizations, Junior Leagues, Chambers of Commerce. When the individual members expressed a desire to help, as so many of them did, they were given cards to sign which petitioned the political parties to pledge themselves to replace patronage with the merit system in all units of government. A quarter of a million of these pledge cards were issued, and a special effort was made to secure signatures of public officials, men and women who were distinguished in diverse fields, and practical politicians who had come to recognize that it was good politics to subordinate patronage to policy and effective public leadership. These cards were used with good effect in the national and state party conventions, and must have helped to secure party promises which were sufficiently specific in character to have become boomerangs when not fulfilled.

One of the most heartening things about the campaign has been the eagerness of many groups to cooperate. The Civil Service Assembly and Civil Service Reform League had been advocating just such advances for years, and, in different ways, entered into campaign techniques with ardor. Various professional groups that had become discouraged over the apparent apathy of the public, took heart and added their strength to the movement. Federal employees, themselves selected on the basis of merit, were living advocates of the advantages of selecting persons who could do the jobs at hand. The American Academy of Political and Social Science devoted an entire meeting and one issue of the *Annals* to qualified government personnel.

To reach the general public, however, it was necessary to enlist the great organs of the press and the radio. The newspapers have been most generous with editorial support and this support has been enlisted in every state but Arizona. It is difficult to measure accurately such support, but certain figures are significant. In one year 900 editorials on the merit system came into the office of the National League of Women Voters. You no doubt are familiar with clipping services, and know that these services do not cover the whole country and only give you those editorials specifically mentioning your organization. Indications seem to point to several thousand such editorials. The columns of news space devoted to the subject have been amazing.

The support, on the whole, has been intelligent. Many papers have developed a program of public education on the subject, have met objections, and have given help on particular measures. For instance, the League's agitation for the Ramspeck postmaster bill resulted in specific commendatory editorials in newspapers in Alabama, Connecticut, Florida, Georgia, Illinois, Indiana, Kansas, Louisiana, Massachusetts, Michigan, Minnesota, Mississippi, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, and West

Virginia. Likewise, the release "The case against the seventy-fifth Congress" was carried in papers from Maine to California. Within three weeks after it was issued, clippings had come in from 31 states, many of them editorials. Incidentally, this release called forth many radio talks. I wish time permitted me to pause at this second great instrument with which to reach the general public and talk about the use made of the radio in the campaign. It was used, I think, effectively, by the presentation of playlets, by informal conversations, by programs featuring leaders of opposing political parties.

The faults of civil service administrations seemed to be the most difficult stumbling block in enlisting support for the principle of qualified personnel in government service. To meet these often valid objections, the report of the Commission of Inquiry on Public Service Personnel was of great value. A group of distinguished men and women traveled from coast to coast, holding public hearings, interviewing many people, investigating the state of public service. Their report was published in a volume which sold for two dollars, and this meant that the distribution was limited to those who were particularly interested and well informed. They were prevailed to put out a twenty-five cent edition. This we used in the campaign, not only to answer objections by presenting a positive program of improvement, but by selling the pamphlet wherever our speakers went. With this pamphlet, the speakers used another twenty-five cent booklet, published by the League of Women Voters, "Trained Personnel for Public Service," and a flier "Short Answers, Showing Why the Merit System, not the Spoils System, Should Be Used to Fill Government Jobs." Forty-five thousand fliers were sold. I mention the sale of these pamphlets, because it provided a way to leave something tangible in the hands of those who were mildly aroused by speeches presenting the subject, something they could read quietly and find the answers to the doubts and questionings that usually beset them.

Recently, other reports have made significant contributions to the subject. The Report of the President's Committee on Administrative Management, with the monograph on the problems of personnel, and the Brookings Report to the special senatorial committee on governmental reorganization, have presented searching analyses into the federal service. The official study commission in Michigan, which presented to the state legislature its findings and the draft of a measure to establish civil service in the state service, has influenced thinking on the subject. The findings of other official and private commissions have been made available to the public, including those from Minnesota, Pennsylvania, Connecticut, and Maine.

Now, to the results. After the expiration of three years and the expenditure of a great deal of efforts, have there been any results at all? I think there have been results. The first result is negative, but none the less important. That is, the issue has been drawn. Perhaps I am optimistic in making this claim, but it seems to me that it is no longer possible for a politician or a legislator to give lip service to the principle of personnel administration and privately sabotage it.

I was much impressed last week when I was here in Washington by this fact. Your newspapers carried the story of Senator McKellar's

bill to do away with the order of the President which had placed first, second and third class postmasters under the Civil Service administration. Senator McKellar, if the papers reported him correctly, said quite boldly that he thought he knew more about choosing a postmaster in his state than any impartial examiner could know. This incident is one of many indications that those who are for patronage are having to come out in the open and say so. They are being "put on the spot," as it were, and they must either say they are for the merit system and really be for it, or they must say that they are for the patronage system and, if they can, justify that position to their public. Such justification seems increasingly difficult.

Secondly, let us consider legislative results. Before 1921 there were nine states in the union that had Civil Service laws governing the selection of state employees. From 1921 to 1936 there was practically no advance. In 1936 a reorganization act in Kentucky carried a limited personnel provision, and in the legislative sessions of 1937 five states initiated thorough-going personnel administrations in their state service. Arkansas, Tennessee, Maine, Connecticut, and Michigan adopted such legislation, the largest advance that had ever been made in any one year. More than that, there were a great many local fights waged for the establishment of local personnel administrations and some of these were successful. The campaigns that were waged in fourteen other states for state personnel laws were very vigorous, and although unsuccessful, did a great deal to educate the citizens of these states in the intricacies of the subject. Such states were New Hampshire, Rhode Island, Indiana, Minnesota, and Oklahoma, to mention a few. In Nebraska, the legislature created a commission to explore the subject and draft legislation.

Nor were all the advances made in the realm of new laws. The nine state measures governing the selection of state employees on a merit basis, were subjected to searching analyses and real advances were made in bringing them up to date and in obtaining better personnel administration. The most successful efforts, I believe, were made in New York, Wisconsin, and California.

The recent issue of the American Public Welfare Association states that 29 states have put in merit systems for the selection of the employees to administer unemployment compensation. This fact alone seems to me to justify the efforts put forth in the Personnel Campaign. For these were new governmental organizations set up to implement the Social Security Act, and the pressure of public opinion for the selection of their employees on a merit basis could make itself felt. The same is true of those states where there has been reorganization of their Public Welfare Departments. My own state of Indiana is one of those states. We had a conspicuous failure in securing legislation for all state employees, but I hope a conspicuous success in getting the unemployment compensation and the public welfare departments under the merit system for the selection of their employees, even down to the county officers.

Can I show any results in the development of public opinion? I think I can. We will put to one side the evidence as shown by a greatly increased number of magazine articles and books on govern-

ment personnel problems and confine ourselves to other aspects. On November second of this year, eleven cities in New Jersey voted to place the selection of their employees under the state Civil Service administration, which is the largest referendum held since the law was put into operation in 1908. The majorities were large, three to one as an average and in some jurisdictions six to one, an overwhelming expression of public approval of the personnel administration in their state.

In the Gallup poll—the Institute of Public Opinion which proved itself to be a more accurate method of measuring public opinion than most polls in the National election—88% of those voting in the poll were favorable to the merit system. In the April issue of *Fortune Magazine*, the results of their poll on the same subject showed a very large majority.

There seems to be no doubt that public opinion has been aroused. As I close, however, I would like to try to justify to you my enthusiasm for this issue. Our government faces now, and must face in the future, desperate problems which need a high degree of cooperation from our citizenry to solve them. We have a country where, in theory at least, we decide these problems by a free vote of a free people. The dignity of the individual is the ultimate justification for democracy. So we are faced with this dual necessity, to preserve on the one hand individual liberty and to solve, on the other, the problems of a complicated industrial and agricultural economy which need the greatest cooperation of every one concerned. Our individual liberty we do not want to give up. We know it is being challenged by changing concepts of government in other countries, where they have ceased to try to solve their problems by the fumbling, slow methods of democracy. But if we are to keep for ourselves the immeasurable privilege of personal liberty, the right to speak out as we think, the intellectual freedom to range over the world of knowledge uninhibited, we must by some means find a way to make our democracy work. Poor administration of any governmental service threatens it, the bunglings and inefficiencies of the patronage system of selecting public employees undermines it. So the fight to get devoted and capable men and women to run our business of government is actually a fight for the preservation of our democracy.

DISCUSSION

We of the public service know well the truth of the view reached by the League of Women Voters—that it is not enough to pass legislation, it is necessary to consider closely the administration of laws. We have seen fine concepts wrecked by poor administration. The vital importance of administrative management is so often overlooked. The fact that a letter of appointment does not carry with it an endowment of knowledge and skill for management is so often ignored. Some day it may come to pass that a man with fine ideas but uninformed and untrained in management will be appointed to a position of responsibility with the stipulation that an associate, trained in management, shall have coordinate authority.

When so many people think of “government” merely from the political angle, it is certainly interesting to employees to know that this great and representative League is looking at the activities of government, the services it renders, from the viewpoint of efficiency and good administrative management. You

know democratic government has been defined as "the people organized to do things for themselves." That, if you analyze it, is a good definition. It must be "the people" if democratic; they must be organized if there is real government; and the only purpose is to "do things" (anything they choose) for themselves—that is, the people, all the people. So when anyone tells you "that is not a proper function of government," you can reply that it all depends on whether or not the people choose to do it for themselves or let someone else do it for them. There can be no other interpretation of "proper" in a democracy. In the Department of Agriculture, we do the job the people give us and try to do it efficiently. To learn how is the purpose back of these lectures. The League of Women Voters, representing the people, is learning how important we are and is properly taking an interest in our efficiency. The members of the League are properly trying to solve the first problem in efficient government—the selection of qualified employees. And we as employees must go on from there and learn how to be efficient.

Here too is a striking example of the force and value of public opinion well-founded in public knowledge. In this connection it was a bit surprising recently to find a widely read columnist expressing this thought:

"I cannot help but resent the attitude which holds that when a private producer, working close to big industrial or banking interests, turns out a tendentious film it is 'entertainment' while it is 'propaganda' when the federal government tries to explain to the taxpayers where, when, how and why their money is being spent."

Usually the columnists and news writers bite the hand that feeds them by cracking down on the "tremendous outpouring of official information from Departments and Bureaus in Washington."

The federal government's information services doubtless could be better organized and more effectively managed. They quite surely are progressing in that direction. But the point is this. The taxpaying public certainly needs, is entitled to, and, as Mrs. Greenough's lecture shows, wants and will act upon accurate knowledge of governmental affairs. It certainly is in the interest of better management and in the interest of every worthwhile governmental activity and officer that such knowledge be disseminated. In other words, more power to our information units.

LECTURE X

EDUCATION IN MANAGEMENT

By DR. W. B. DONHAM

I AM asked to talk to you today about training for management. I wasn't consulted about the title. I should like to change it to training for administration, because I think in terms of administration rather than in terms of management, although words are used so loosely in language that either term can be defined to include everything that is in the other.

Now, it is a dry topic—training for administration. It would be a lot more fun for me to give you a political speech on the things that have been going on in Washington for the last five years. I am sure that while we would have many disagreements, no matter what our shades of opinion were, you would be much more interested in such a talk than you will be in what is after all a rather technical subject—training for administration.

It happens, however, to be a most interesting topic for me because it is my specialized job to work on the general theory of a school interested in training for administration in the field of private business. Essentially I see no difference between administration in public affairs and administration in private affairs. The logical problems are identical. The actual content does not vary so much as the angle of approach. No school of business today can ignore the subject of public administration as one of its major topics of interest. No school of public administration can safely ignore the subject of private administration as one of its major topics of interest.

I want to start with what those of you who have a training in the sciences will recognize as pretty much an essential to the evolution of any scientific attitude toward a new field. I shall define a conceptual scheme within which I personally think about administration.

As I read the history of science and talk with men interested in the evolution of different sciences, I observe that little progress is made in the scientific attack on any new field until slow trial and error has gone far enough to produce at least in rudimentary form a conceptual scheme to order the thinking within that area. To me administration is a social science independent of economics, of political science, of all the other social sciences, independent in the sense that it starts with a different set of abstractions. Its problem is never the problem of turning itself into an application of some one of the other applied sciences. Administration cannot be, for reasons that I shall go into presently, applied economics. Administration can not be applied political science. Administration starts with a different set of abstractions from any other field in the total range of human knowledge. We find it has to start with a different set of abstractions. As we study the facts that come to the administrator and as we try to define the problems that come to him, they never, at the point where

men have to act, confine themselves within the abstractions of any of the other social sciences. We have been forced to define and re-define administration as we worked along. So long as we thought we were engaged in applying some other science, our concept didn't work.

For example, fifteen years ago the faculty of the school of business administration over which I preside reached the conclusion that it should think of itself as a school of applied economics with minor responsibilities toward the fields of engineering and law. And then we began to study the subject concretely by bringing in to the school what, for want of a better name, we term "cases." These cases are efforts to report the facts surrounding particular administrative problems. They rapidly destroyed the concept that we should think of business administration as applied economics.

Even though the men we sent out to gather the facts of these problems went out with the definite errand of recording and putting on paper economic facts, the facts that they brought back wouldn't stay economic. There were all sorts of things entering into the situations that weren't within the concepts and the abstractions, the selected premises that the economist is in the habit of letting bound his thinking. There were all kinds of non-economic factors and there were non-engineering and non-legal factors that came in. We made the discovery that while two and two in mathematics is always four, two and two plus the x of human relations and "imponderables" involved in any situation is never four.

There wasn't a single problem that we could collect and put in case form that would stay within any social science field to which we tried to limit our thinking. After struggling with the problem year after year, some of us have reached a definition, a framework within which we can order our thinking on the subject of administration.

I am going to read this framework, it is just three or four lines: "Administration is the determination and execution of policies involving action. Such policies must be conceived by men. Such action must be effected by human organization and such policies react on human beings."

That is closer to a statement that the foundation of administration is human biology than it is to a statement that the foundation of administration is applied economics.

The emphasis in our public press on economics as the core of the problems facing this nation, the emphasis in the thinking in both public and private affairs on the economic aspects of the situations that develop is, in my opinion, most unfortunate. It ignores the most important variables in practically every problem and because it ignores them, it leads to action that would not have been taken if the problem had been conceived more broadly and more premises had been taken into account.

Why the emphasis on action in this definition. In the words of Alfred North Whitehead, "If knowledge isn't useful, what is it?" So long as we ignore action, so long as we fail to face the fact that our knowledge should be useful as men work in every-day life, we don't face the problems of men of affairs, of administrators. It is the job of men of affairs to act, or to act just as emphatically by refraining from action.

When I say that administration is a separate social science emphasizing action, I am not minimizing the other specialized social sciences developed on other abstractions for other objectives, any more than I am minimizing science and engineering in the natural science fields. Indeed, it is important that men should understand just where and how those other specialized sciences can be useful. Otherwise we shall continue to turn out from our universities and our colleges hundreds of thousands of men who have devoted on the average perhaps a quarter to a third of their college careers to the study of social sciences but who can never make what they have learned useful to themselves or others in the world of affairs. This failure isn't because what they have learned is useless. It is because the universities have not faced the problems that come up at the point where men must act, and show the graduates of our colleges how they can apply their social sciences while they are living their lives. Now in too many cases when they try to act with reference to their social science training, they can not do so. The abstractions were selected for other purposes than theirs. They can not think out in isolation the probable effect of certain selected variables in the whole human situation. They must act with reference to all the facts. But their social science selected part of the facts, taking them out of their social setting. By that selection the partial facts selected became an unsound basis for the determination of policies involving action.

The premises of political science and consequently the conclusions of political science are different from economic premises and conclusions. As a result in many situations political science says *X* and economics says not *X* and there is no compromise between *X* and not *X*. Social sciences differ from the natural sciences, where all the premises are recognized to be all inclusive, where the inanimate object always behaves in the same way under the same conditions. A group of natural scientists with very diverse backgrounds can get together and discuss the same thing always from the same premises, or from premises that they are perfectly ready and willing to agree on.

Compare that situation with the state of mind of a group of social scientists who will spend any period that you ask them to spend arguing about policies. What they are really doing is differing on premises. They never talk about the same things, though they often use the same words. Because they are not talking about the same things, there is never agreement on conclusions. So far as such discussions result in the determination of policies, the policies almost always ignore many of the most important factors which should affect the decisions.

We are endeavoring to work out the logical and practical problems of the man who must act and so we say that administration is the determination and execution of policies involving action. Now, it is possible to define the problem involving action. It is possible to define it in such terms that you can reach out and get aid from experts in various aspects of it. But in using experts the administrator must understand that what he gets from experts is not a conclusion to be put into effect but rather aid in reaching his own conclusion from all the important premises. Of course, when I say all the important

premises, I do not mean that quite literally. There is an essential sorting that goes on in any event, and no one of us can conceivably include all the important premises in arriving at a decision, but it is essential that administrators in positions of public and private responsibility should stop thinking as specialists. It is unfortunate and it is the fault of the universities that the condition exists—that the thinking of the community should so largely be done by men who take and develop only one specialized point of view and ignore all the other pertinent facts. It is very important that we should get men to understand that when they approach an administrative problem it is essential to drop the limitations that surround the abstractions of any one social or physical science and having dropped them, to explore the concrete facts surrounding the problem in order to see what the really significant avenues for study may be, and then to reach a conclusion based, so far as human judgment makes it possible, on that broad consideration of the facts. For administrative policies must be conceived by men with all the limitations that surround men.

We can't train for administration by piling up specialized training in each of several fields. No man can become an expert in everything. The economist says "It takes six years to make an economist." The political scientist says, "It takes six years to make a political scientist." The sociologist claims "It takes six years to make a sociologist."

If we attempted to pile up such specialties to cover what the administrator needs, we should end with men at fifty still inadequately trained but by that time they would have lost all capacity for action. We can't do it that way. Not only have we got to find out, as a part of the job of training for administration, how to give men the fundamental point of view that the concrete situation—the case if you will—must be considered in its wide implications, but we have got to train men how to use experts effectively.

Such policies, such action must be effected through human organizations. That fact is an exceedingly important aspect of this framework within which we are trying to think. It is in the nature of authority, if I read human nature and society aright, that authority is never wisely imposed from above but is lent and delegated from below; that the real basis for authority is in recognition by the man on the firing line, be he the laborer, the private in the army, or whoever, that the use of authority is the appropriate way to accomplish the results that men wish to attain.

I insist on the point that authority should never proceed from the top down. Organization charts must to a certain extent proceed from the top down. We must have certain rituals by which order is brought into the complex transactions of the world of affairs. Organization charts and the things that go with them are intended to develop that kind of order. The fact is that no organization is healthy if it lacks a spontaneous social organization that never gets on the chart but that is far more significant than the things that are on the organization chart. It is this spontaneous social organization which really determines the little ways of men and the ways in which they shall collaborate. And, in the last analysis, the art of handling

human beings is to help the spontaneous evolution of those little ways in which men naturally and happily collaborate to bring about a joint result.

It is a hard definition. It is the statement of an ideal. It is the objective to which all administration should direct its efforts. It is the explanation of the fact that you can't build administrative organizations—and I make that statement advisedly—you can't build administrative organizations overnight or in a few weeks. You can hire the men. You can put the Blue Eagle into every hamlet in America, but you haven't an organization when you have done it. If you have 50,000 men in the regular employment of the Department of Agriculture, you can put the Department of Agriculture into every county in America because you have got the organization to work with.

It is inherently impossible to build great organizations overnight. I believe it has never been done except under the disastrous integration of a great war or some similar threat. It requires a great emergency to integrate things from the top down. The growth in human beings' knowledge of each other, the building up of the unconscious social organization that takes place in the offices, in the rank and file, and at every level in the organization, that unconscious spontaneous thing which alone makes a smooth working organization of any size takes time, because one does not build up ways of collaborating with new people until he comes to like or respect or dislike them as individuals. Underlying the whole problem of administration is this frequently overlooked fact, that the determination of a policy, be it by the ukase of the directors and executives of a corporation or by an Act of Congress, has not finished the administrative program or even made it possible. You have got to go further than that and work until you have a group of human beings who automatically, because they have developed little ways that make it automatic to get together, will collaborate instead of looking wild-eyed at their next-door or next-desk neighbor and wondering whether he is "the kind of bird I am going to be able to get along with."

The building up of an organization is a spontaneous thing that takes time to develop and it is infinitely more important than anything you can put on any organization chart. These things have tremendous effects on human beings. Sometimes we forget that fact. It has been forgotten by the scientists of the world and by the engineers of the world.

The pure scientists have chosen, I think unwisely, to feel that the advance of knowledge is their intrinsic objective and that they ought to pay no attention to the implications of the advance of pure science. The applied scientist has gone ahead without much attention to human beings because in applied science mechanical things work so much more easily than human relations. They have tended to do the easier thing and to ignore the other. Because applied science is a relatively simple thing, the body of engineering knowledge has developed constantly and at a terrific speed. The engineering schools of the country have allowed almost all other subjects to be forced out of their curricula by the pressure of this necessity of keeping up with engineering and scientific knowledge and training. As a result, our in-

dustries for the last thirty years in this critical period of American history have been run by men who left our universities without any adequate conception of the importance of the social organization, left without an understanding that men are social animals and that an improvement in a machine may be a critical upset to a social organism.

I have known the change in the seating arrangement of five girls in a room to reduce production a third. The change in seating had disrupted the social organization in the room, the spontaneous organization, to the point where production dropped a third.

The social organization is far more important than the incentives that we are in the habit of giving in the factories because it has been assumed, throughout the whole range of corporate management and labor relations, that high wages would make contented workmen, that the way to get more production was through material incentives. The incentive should be not so much economic as social. Men should feel that they have a place in life. We have gathered together from the ends of the earth men of different languages, races, religions; we have dumped them into great cities without any social organization, without any neighbors that they knew; and we have thought that we could go ahead as we pleased in the advance of applied science and assumed that if we paid high wages and established high material standards of living, the result would be a happy nation. We have forgotten that economic standards have never been the core of human happiness, that the core of human happiness lies in serviceable contacts with other men.

In all our administrative activities we have forgotten that changes—mechanical and scientific improvements—almost inevitably disrupt spontaneous collaboration, rip up the little ways of men that are affected by the change. Happiness for a nation requires established little ways by which men live in harmony with their neighbors, in social contact with their neighbors, and in ways serviceable to their neighbors. That statement applies not only outside the factory and outside the government but inside the government and inside the factory. We have ignored those things in the name of efficiency and material progress.

So the framework within which I think of administration—I will read it again—is the determination and execution of policies involving action. Such policies must be conceived by men. Such action must be effected by human organization and, again, such policies are important because they affect human beings.

Now, how can you teach such a subject? We have discovered only one way to do it. No method is perfect but we have discovered one way to do it and that is by the case system. The only way that we know to make men think in terms of all the selected important variables in a situation is by putting all these variables before them, at least by implication. They are trying themselves to take the initiative and think the problem through. We must keep bringing out in discussion wider and wider implications of the subject as their state of training makes it possible to extend their thinking more and more broadly.

The case system as we use it starts with reported concrete situa-

tions, reported in a conscious effort to bring in as we can and in so far as we can, all the variables including the human variables in the situations. We have far to go in learning how to report, but it starts with that objective. Instruction is based on preparation by the men among themselves, individually and collectively, over the breakfast table, over the lunch table, over the dinner table, discussing from morning to night, trying to think the problems out for themselves and then coming in to the classroom ready to enter into an active discussion of what the implications of each situation may be. It isn't applied economics. The hardest course for which we collect cases in the Harvard Business School is our course in Business Economics. The difficulty with it is that in reporting concrete situations, we just can't make the cases stay economic. The result is that in order to teach a course in Business Economics in the Harvard Business School today it is necessary for the instructor constantly to say to the class, "Now, don't let's forget, we are not trying to work out this problem as a problem, we are ignoring all these things, we are trying to see what aid we can get from the modes of thinking and the attack of the economists. Let's forget these other implications because they are not within the ordinarily accepted abstractions of economics and, for the moment, we are sticking within those abstractions."

There is another problem that we haven't solved at all. That is the time element required in such training. It can't be done in a minute, it can't be done in a course of lectures, it can't be done in a year. It is a long slow job, because training by the case method of approach, based as it is on starting right in with selected concrete situations and developing from one orderly presentation to another in an ascending order of difficulty and of complexity is just exactly like starting a picture puzzle. When you start a picture puzzle you know that it is hard to see any pattern to the thing whatever. You may go for several evenings sorting out colors, shapes and sizes before you begin to get the slightest inkling of the pattern.

It is apparently an extremely slow process. In the beginning men don't see where they are at all. We expect a period of three months of almost complete confusion before they can begin to make the integrations that are necessary to get this more general point of view. We expect their first integrations to be isolated integrations, not economic related to the situation but within some assumed landmark because we can't attack a series of problems, we have to classify them. We expect the first year to be devoted to laying a foundation on which at the end of a year of hard work they may begin to see the real pattern of things. We expect the second year to be devoted to destroying a considerable part of the definiteness that the first year has created in their minds in an effort again to broaden their basis and to make them think in more general terms, and we would like to keep the ablest of them for two years longer so that they may explore things still further.

Training for administration is a slow process but it is a different thing from any other social science. Administration is a thing apart, with its own set of abstractions, with its own relationship to other social sciences. Administration is essentially the same whether it be

concerned with public administration, or with private administration. It shares the same problems, so far as administration is concerned, with public administration, with private administration, with army administration, to a considerable extent with school administration, and with city administration. They are all the same type of thing. They all fall into the same general conceptual scheme and the principles of attack on one, in my opinion, apply to attacks on all.

Now, that is everything. It is dry, it isn't particularly helpful, but I was asked to tell what I thought about the approach to training for administration. This involves defining the conceptual scheme which, as the result of twenty years of intensive work, we finally arrived at and are constantly trying to improve, and then relating that conceptual scheme to the kind of training that we have found from experience does give a grasp of the subject, that men who are going to practice the science and art of administration need if they are not going to make the most shocking blunders.

I will now be glad to answer any questions.

Question: It would be interesting to me to know something about the type of materials in these cases.

Dr. Donham: What is your job?

Answer: General Accounting Office.

Dr. Donham: In what?

Answer: In government.

Dr. Donham: What sort of work do you do? I am not trying to discourage questions, I am trying to demonstrate the fact that the gentleman has been working on cases every day that he has been busy.

Question: I was interested in the variable human factors, I just wondered how you approached them, just a few words as to your line of attack.

Answer: This morning when you came to tackle a problem that had been referred to you by some superior officer which involved the methods of handling a complex situation of accounting, one of our research men might sit down with you and ask for the facts—then take it into the classroom and put it exactly to the men in the school. We are trying to and succeeding in developing techniques for studying human relations, for handling men better than they are now being handled and we are trying to teach those techniques to employers of labor, among other things. We know one or two plants that have changed their whole method of supervision over to methods they have developed in collaboration with us as better methods of handling men. Now, they are not in the form of wage incentives, not in the form of shorter hours or lunch periods or anything of that sort, but the basic attack is on the problem of making men happier at their work and we are finding ways to do it. That is a long story. You wouldn't expect me to describe briefly the results of a dozen years of research on which we have spent something like a million dollars trying to get into that field and do something effective, but we are doing something effective. If you are interested, write me, I could send you some references.

Question: What distinction, if any, do you make between the case method and the problem method of teaching?

Answer: The real distinction is a fuzzy one because if you are using the word "problem" as I am using the word "case," there is no distinction; but if you are using the word "problem" as I know a great many people do, there is a great distinction. I don't know what you mean by problem but the problem method of attack as we have run into it from people who say they are teaching by the problem methods starts with a series of lectures and uses the problem as an illustration of the mode of attack; that is, the problem is the instance and the didactic instruction is the primary part, the problem being put in as a research problem where a man is expected to apply his didactic knowledge.

On the case method of approach there is practically no lecturing; lecturing is always incidental—it is restricted, practically entirely to two things, occasionally filling a gap where problem material is lacking and needed, or, more often, trying to summarize a week or a fortnight's work to get it in a little more orderly shape, but the case is the core of it. The men are expected to deduce their principles from the case, not to be told how to do a thing. It is not a lecture, illustrated by a probable situation and discussed by the lecturer, or by an independent research problem.

Question: Will you tell us the development of the proposed Graduate School of Public Administration at Harvard?

Answer: So far as the Business School is concerned, it has not changed our plans to go on and develop instruction in public administration for our own purposes and for our own group within the school, because we are entirely convinced, as are the university authorities, that we can't give effective training for business and ignore governmental relationships. So far as the new school is concerned, it is wisely, I think, making a slow start. I think this is wise in every sense, because, although there is a national emergency which requires a fast start, I don't think you get very far by making an unwise fast start in such an important area by trying to turn out numbers of badly trained men. They are trying to get a slow start and at the early beginning, most of the students—all of them last year, nearly all this year—have been in-service men on leave. It isn't the intention to restrict it to service men, it is the intention to broaden it beyond that. They are trying to find out what this problem of administration is in a new school with a new faculty, and I know from experience that is not a thing that can be hurried. It has got to grow and evolve; if it is hurried it will never really do the job. I think the policy is a wise one. There is an able faculty. The dean of the school is an exceedingly fine appointment, John Williams. He has been in economics, in the New York Federal Reserve Bank for some years, and is a very broad person with many sides to his experience. He has just started in this fall. I anticipate that he will do an outstanding job. I feel confident of the future but I do not expect a rapid growth in the school from what I have heard of their policies and, so far as I am personally concerned, I think their policies are wise in that regard. Does that answer your question?

Question: Has it been decided that the length of the proposed course will be a one or two year course?

Answer: Why, I don't suppose it has, in any definitive sense. I was on the committee that made the report on which the school was set up and we made a very definite distinction in our minds between the in-service man who would come typically for one year for some special training that he wanted, and the training of men who came, who desired to go into public service without experience in public service, where it was admitted all round that the job was certainly no easier than the training for private business and would require the same amount of time. I suspect, therefore, that it is a proper answer to say that for the in-service man it is typically a one-year program and for the man who wishes training for government service without having been in it, it is two years. It certainly wouldn't be more than two years to start with because one builds up a third year in a thing like that slowly, if at all.

Question: Presumably the school assists the students in acquiring a certain amount of technique in handling action. Do you feel that the transition from the school into business, that in that transition they come to places where they can assume the responsibility that they are trained for in the school or when they transfer out in business do they have to go down and climb up again?

Answer: Except in a rare case where both the employer and employee go against our wishes, desires, strong advice and strenuous efforts, they go down and start up. We are convinced that there is no substitute for a period of time when a man rates himself as a beginner and because he is bound to be rated by his associates as a beginner, he had better concur in that rating or he is very unhappy. There is no substitute for going through a period of routine training on small jobs. There is this difference—I have seen it happen among my own sons so clearly—that when they leave the school, go into a business and take on a very small job, they will come home for the week-end and discuss the relationship of that small job to the department and what must be the relationship to the top job in the institution. In other words, the training enables them to take that routine job with a vision of its implications and what must be happening in other parts of business. That is of great significance but if it ends in short circuiting the process of routine training, I am terribly disturbed. I have seen it happen.

Question: You indicated that you would like to keep some of the students for four years rather than two years?

Answer: I believe the characteristic of the human race—that differentiates it from all other animals—is prolonged infancy.

I believe that we can do for most men who come to us all that we are likely to do or, rather, to state it more accurately, that we will run into diminishing returns very rapidly after two years. I think that the best of them can with advantage stay with us three, four or five years. We have tried it over and over again and it works, but for most men I think we do about all we can, and it is a lot, in two years. After that I like to see them on their own. As for the occasional fellow of exceptional ability, I don't care how long he stays.

Question: When he leaves at the end of four years, is it not more difficult for him to climb down?

Answer: He doesn't have to climb so far. Such men we are able definitely to rate as more than beginners and they are more than beginners.

DISCUSSION

Dr. Donham gives us important testimony based on personal experience on the frontiers of the effort to raise the standard of living and increase the sum of human happiness by giving the management concept a chance to help. It is notable that Dr. Donham continues the emphasis on human relations which has run so strongly through the series of talks.

But Dr. Donham is qualified to give us important news on training for administration. We are all interested in that phase. When he says that he and his associates have discovered by painful experience that administration starts with a different set of abstractions, he is dealing with a critical problem in practical administration. Too often, even today, it is assumed that by "piling up specialized training in each of several fields" competence for administration thereby results as a by-product. Dr. Donham's comment on that assumption is an unqualified "no."

Organization chart enthusiasts need Dr. Donham's discussion of the "spontaneous social organization which never gets on the chart." It is so easy—and so disastrous—to drift into the belief that all the essential information about an organization can be captured and recorded on a chart. The traditions of an organization, the "little ways" by which men collaborate—or harass each other—may be and often are far more important to the end result than any of the facts susceptible to charting.

Most men can not go to a school to study management. But for this great majority of present and potential managers, there is comfort and inspiration to be had from Dr. Donham's discussion of problems and the case system. With the aid of a few good texts on management, a few associates with whom discussions can be had, "trying to think problems out for themselves," and use of the "cases" that come up in the daily work, a very respectable job of training can be done without attending school. But why not a school?

Our federal government trains in two great schools its own officers for Army and Navy. In the "overhaul of the administrative management of the government" of which the President spoke in his message to Congress January 12, 1937, and which is probably soon to be accomplished, is there a place perhaps for the establishment of a third great government school of Civil Administration?

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The outstanding thing about these lectures is their unity of thought, and the fact that, in their several different ways, they all emphasize the same things. Here we have ten different men from ten widely different work situations, each speaking without knowledge of what others will say or have said, all telling us the same things about the human element; each telling us of the new consciousness on the part of employees, their new aspirations for recognition as human beings, and their desires to cooperate in the organization's struggle to accomplish. "Every problem of management ultimately resolves itself into a problem in human relations." We are told this in one way or another ten different times.

Mr. Tead not only emphasized these things but emphasized also his belief that in the federal service we have before us a new recognition and a new awakening to the importance of these truths, and the development of new methods in their recognition. Dr. Person, while discussing principles involving research, standardization, planning, etc., points out the necessity for the human approach. Dr. Uhrbrock dismissed all other phases of management as secondary and frankly discussed personnel as the central controlling motivation in all administration.

Mr. Wolf, the industrial executive, gave us a lecture on the psychology of the worker and how certain factors affect his efficiency and his satisfaction on the job. Mr. Hicks looks at every problem from both the employee and the management point of view, not as employees and managers but as humans all. To this psychologically sound human approach, he undoubtedly owes much of his outstanding accomplishment in the industrial relations field.

Mrs. Greenough in her approach from the public's point of view, and in the planning of the League's campaigns, recognizes that politicians and statesmen, as well as the worker and the public, are human. Her problem certainly is one of human relations rather than economics.

Dean Donham sums the whole thing up when he says that administration is a science based on human biology. If they stopped here, they would leave it up in the clouds. But they do not. Dr. Donham mentions also *policies* involving *action*. So after all there must be action, that is, the doing of things, and doing them not just any way but according to policy—in the recognized standard manner. So after all administration is an exact science, it involves finding best ways through research; it involves thinking in terms of all the selected important variables in a situation; it involves the determination of accurate specific control records; it involves the manipulation and use of all these things in a way that does not violate any of the principles of psychology that will adversely affect personnel; and it involves doing them in moving directly toward the objective, and in acting in the best interests of all the people.

This impresses us as being quite a job—a big important, intriguing job; one that calls for the best efforts of the best men. However that may be, the lectures have been extremely valuable for their informational material, but much more so for the inspiration they give and the hopes they engender for better things.

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